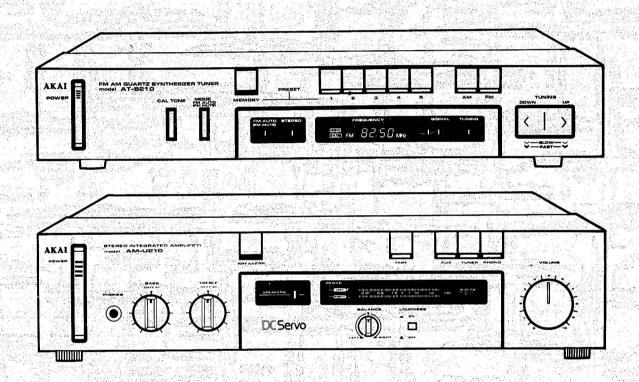


# AKAI SERVICE MANUAL



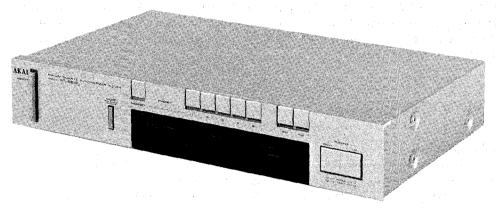
FM AM QUARTZ SYNTHESIZER TUNER

MODEL AT-S210/J

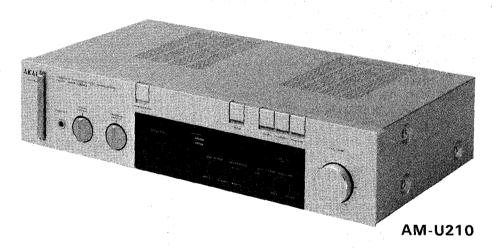
MODEL AT-S210L

STEREO INTEGRATED AMPLIFIER

MODEL AM-U210/J



AT-S210



## FM AM QUARTZ SYNTHESIZOR TUNER



THIS MANUAL IS APPLICABLE TO BOTH SILVER AND PEARL SHADOW PANEL MODELS

SECTION	1	MODEL AT-S210/L/J SERVICE MANUAL	3
SECTION	2	MODEL AM-U210/J SERVICE MANUAL	31
SECTION	3	PARTS LIST	51
SECTION	4	SCHEMATIC DIAGRAM	67

#### **SAFETY INSTRUCTIONS**

#### SAFETY CHECK AFTER SERVICING

Confirm the specified insulation resistance between power cord plug prongs and externally exposed parts of the set is greater than 10 Mohms, but for equipment with external antenna terminals (tuner, receiver, etc.) and is intended for  $\boxed{C}$  or  $\boxed{A}$ , specified insulation resistance should be more than 2.2 Mohms (ground terminals, microphone jacks, headphone jacks, line-in-out jacks etc.)

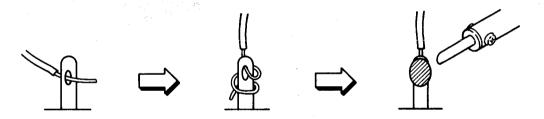
#### PRECAUTIONS DURING SERVICING

- 1. Parts identified by the  $\triangle$  symbol parts are critical for safety. Replace only with parts number specified.
- In addition to safety, other parts and assemblies are specified for conformance with such regulations as those
  applying to spurious radiation. These must also be replaced only with specified replacements.

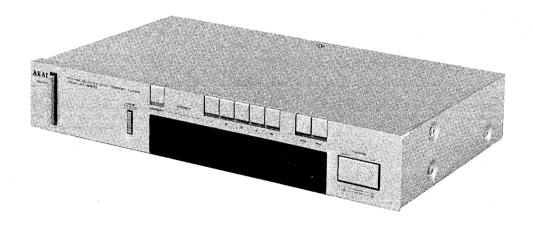
  Examples: RF converters, tuner units, antenna selector switches, RF cables, noise blocking capacitors, noise

blocking filters, etc.

- 3. Use specified internal wiring. Note especially:
  - 1) Wires covered with PVC tubing
  - 2) Double insulated wires
  - 3) High voltage leads
- 4. Use specified insulating materials for hazardous live parts. Note especially:
  - 1) Insulation Tape
  - 2) PVC tubing
  - 3) Spacers (Insulating Barriers)
  - 4) Insulation sheets for transistors
- 5. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.), wrap ends of wires securely about the terminals before soldering.



- 6. Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.).
- 7. Check that replaced wires do not contact sharp edged or pointed parts.
- 8. Also check areas surrounding repaired locations.
- 9. Use care that foreign objects (screws, solder droplets, etc.) do not remain inside the set.



## SECTION 1

# SERVICE MANUAL

## MODEL AT-S210/L/J

## TABLE OF CONTENTS

I.	SPECIFICATIONS
П.	DISMANTLING OF UNIT
Ш	1 MODEL AT \$210/J
	1. MODEL AT S210/L
	2. MODEL A1-3/10J
IV.	PRINCIPAL PARTS LOCATION
	1. MODEL A1-5210/L
	2. MODEL A1-3/10/1
V.	VOLTAGE CONVERSION
VI.	OI LIKATION
	1. FM SYNTHESIZER BLOCK DIAGRAM
	2. AM SYNTHESIZER BLOCK DIAGRAM
	3. AT-500-A PIN CONNECTION 11
	TONCTION OF ALSON, A TERMINATE
	5. MUTE CIRCUIT OPERATION
	O. LED DRIVE CIRCUIT OPERATION
	/ DUCK OF CIRCUIT OPERATION
	O. REI MAIRIX
VII.	ADJUST MENTS
	1. AM (A1-5210L: MW) SECTION ADMISTMENT
	2. Dr (A1-3210L OHY) SECTION ADHISTMENT
	5. THE BECTION ADJUSTMENT
VIII.	CEASE TEATION OF VARIOUS P.C. BOARDS
	11 LES AND IDENTIFICATION NUMBERS
	2. MODEL AT 5210 COMPOSITION OF VARIOUS P.C. ROADD
	J. MODEL AT-5210L COMPOSITION OF VARIOUS P.C. POARD
	4. MODEL AT-S210J COMPOSITION OF VARIOUS P.C BOARD
	29

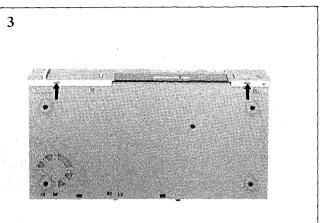
For basic adjustments, measuring methods, and operating principles, refer to GENERAL TECHNICAL MANUAL.

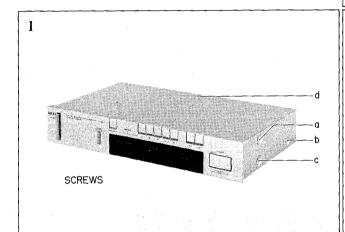
## I. SPECIFICATIONS

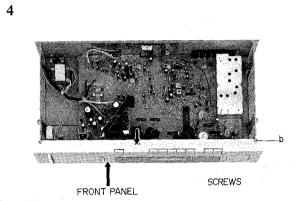
TUNING FREQUENCY RANGE	87.4 to 108.1 MHz (Except 76 to 90 MHz (JAPAN)	JAPAN)	
SENSITIVITY  USABLE (S/N = 30 dB, Mono)  QUIETING (S/N = 50 dB, Mono/Stereo)	11.2 dBf 16.2/37.2 dBf	:	
CAPTURE RATIO	1.5 dB		
SELECTIVITY (±400 kHz)	60 dB		
IMAGE REJECTION	85 dB		
IF REJECTION	90 dB		
SPURIOUS REJECTION	90 dB		
AM SUPPRESSION	60 dB		
SUB CARRIER SUPPRESSION	60 dB		
S/N (Mono/Stereo)	72/65 dB		
T.H.D. (±75 kHz Deviation, Mono/Stereo)	0.09/0.18%		
STEREO SEPARATION (1 kHz)	45 dB		
FREQUENCY RESPONSE	30 Hz to 12 kHz ± 0.5 dB		
OUTPUT LEVEL (FM, 100% Modulation)	550 mV		
ANTENNA INPUT IMPEDANCE	300/75 ohms (Except V) 75 ohms (V)		
AM TUNER SECTION			
	AM (MW for AT-S210L)	LW (AT-S210L only)	
TUNING FREQUENCY RANGE			
USA and CANADA OTHERS	530 to 1610 kHz 522 to 1611 kHz	137 to 362 kHz	
	300 μV/m	800 μV/M	
USABLE SENSITIVITY (Loop) SELECTIVITY	35 dB	35 dB	
IMAGE REJECTION	45 dB	45 dB	
IF REJECTION	32 dB	30 dB	
	40 dB	34 dB	
S/N T.H.D.	1.0%	2.0%	
	1.0/0	2.070	
OUTPUT SECTION	2.4 kohms		
OUTPUT IMPEDANCE	2.4 KOIIIIS		
OTHERS			
POWER CONSUMPTION	10W	•	
POWER REQUIREMENTS	100V, 50/60 Hz for JAPAN 120V, 60 Hz for USA and		
	220V, 50 Hz for Europe ex		
	240V, 50 Hz for UK and A	ustralia	
		Hz switchable for other countries	
DIMENSIONS	440 (W) × 80 (H) × 246 (D) mm (17.3 × 3.1 × 9.7 inches)		
WEIGHT	2.3 kg (5.1 lbs)		

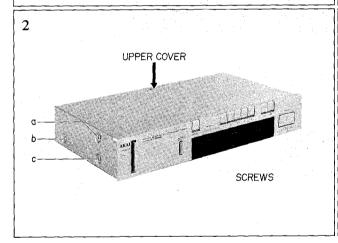
<sup>\*</sup> For improvement purposes, specifications and design are subject to change without notice.

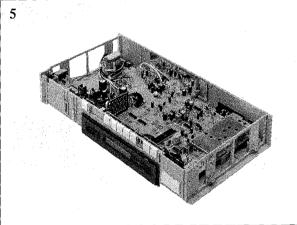
In case of trouble, etc. necessitating dismantling, please dismantle in the order shown in the photographs. Reassemble in reverse order.





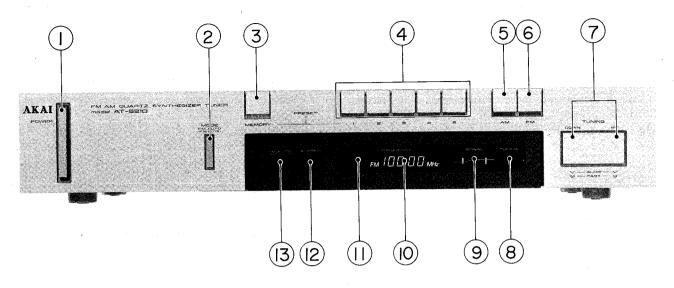


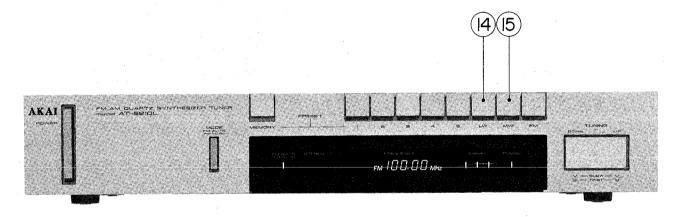




#### III. CONTROLS

#### 1. MODEL AT-S210/L





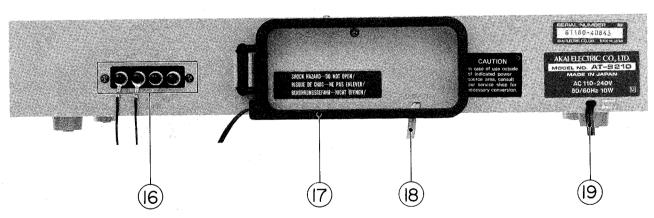
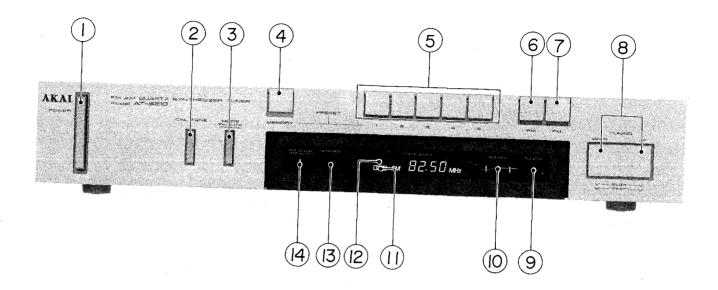


Fig. 1 Controls (AT-S210/L)

- 1. POWER SWITCH
- 2. FM MODE BUTTON [FM AUTO (FM MUTE)]
- 3. PRESET MEMORY BUTTON
- 4. PRESET STATION BUTTONS WITH INDICATORS
- 5. AM BUTTON WITH INDICATOR (AT-S210 ONLY)
- 6. FM BUTTON WITH INDICATOR
- 7. TUNING BUTTONS
- 8. FM TUNING INDICATOR
- 9. SIGNAL STRENGTH INDICATORS
- 10. DIGITAL FL DISPLAY

- 11. MEMORY (MEMO) INDICATOR
- 12. FM STEREO INDICATOR
- 13. FM AUTO (FM MUTE) INDICATOR
- 14. LW BUTTON WITH INDICATOR (AT-S210L ONLY)
- 15. MW BUTTON WITH INDICATOR (AT-S210L ONLY)
- 16. FM, AM AND AM LOOP ANTENNA TERMINALS
- 17. AM LOOP ANTENNA
- 18. OUTPUT PIN PLUG CORD
- 19. POWER CORD

#### 2. MODEL AT-S210J



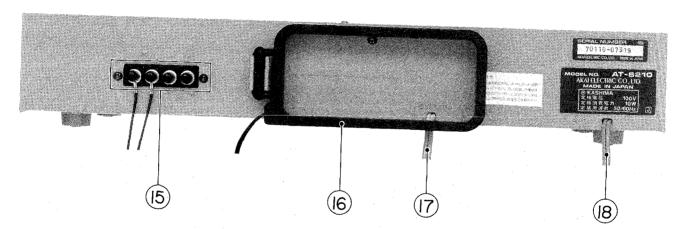


Fig. 2 Controls (AT-S210J)

- 1. POWER SWITCH
- 2. CAL TONE SWITCH
- 3. FM MODE BUTTON [FM AUTO (FM MUTE)]
- 4. PRESET MEMORY BUTTON
- 5. PRESET STATION BUTTONS WITH INDICATORS
- 6. AM BUTTON WITH INDICATOR
- 7. FM BUTTON WITH INDICATOR
- 8. TUNING BUTTON
- 9. FM TUNING INDICATOR

- 10. SIGNAL STRENGTH INDICATOR
- 11. CAL TONE INDICATOR
- 12. MEMORY (MEMO) INDICATOR
- 13. FM STEREO INDICATOR
- 14. FM AUTO INDICATOR
- 15. FM, AM AND AM LOOP ANTENNA TERMINALS
- 16. AM LOOP ANTENNA
- 17. OUTPUT PIN PLUG CORD
- 18. POWER CORD

## IV. PRINCIPAL PARTS LOCATION

#### 1. MODEL AT-210/L

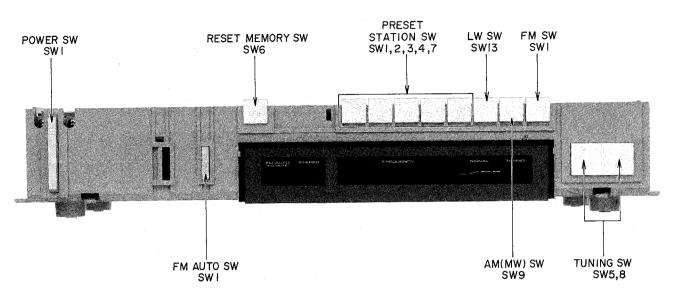


Fig. 3 Front View

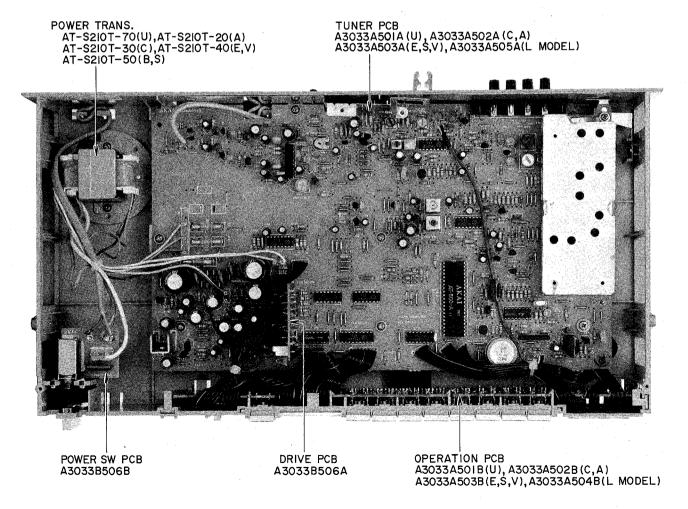


Fig. 4 Top View

#### 2. MODEL AT-S210J

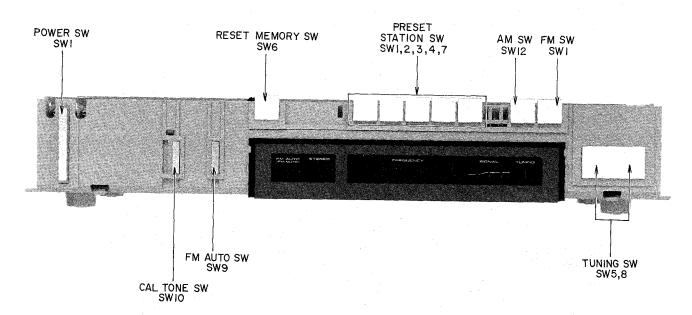


Fig. 5 Front View

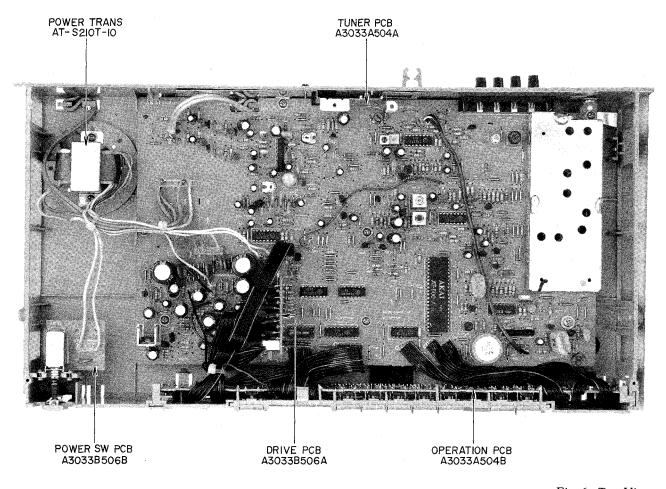


Fig. 6 Top View

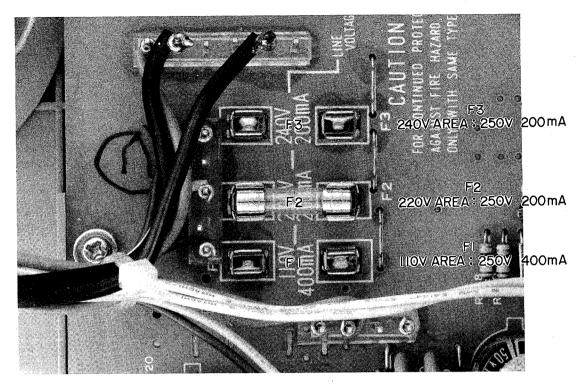


Fig. 7 Voltage Conversion (U Model Only)

Models for JAPAN, Canada, USA, Europe, UK and Australia are not equipped with this facility.

Each equipment is preset at the factory according to its destination, but some equipments can be set to 110V, 220V or 240V as required. If voltage change is necessary, this can be accomplished as follows.

- 1. Disconnect the Power Cord.
- 2. Loosen the holding screws and remove the top panel.
- 3. Remove the existing Line Voltage Fuse and insert the required Line Voltage Fuse into the proper fuse holder.

Follow markings explicitly.

## 1. FM SYNTHESIZER BLOCK DIAGRAM

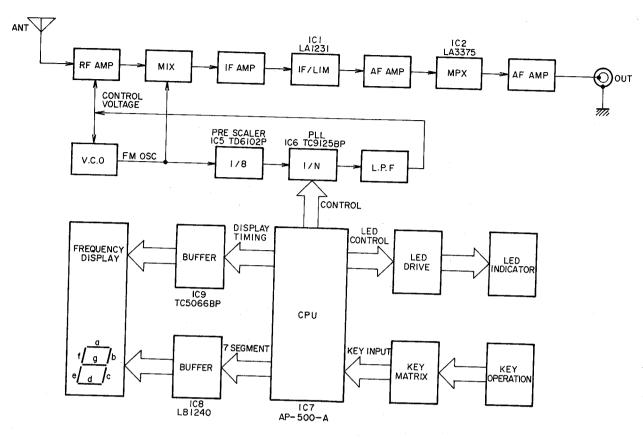


Fig. 8 FM Synthesizer Block Diagram

## 2. AM SYNTHESIZER BLOCK DIAGRAM

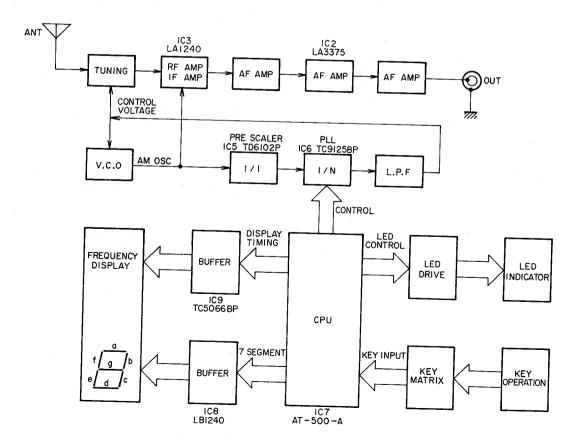


Fig. 9 AM Synthesizer Block Diagram

#### 3. AT-500A PIN CONNECTION

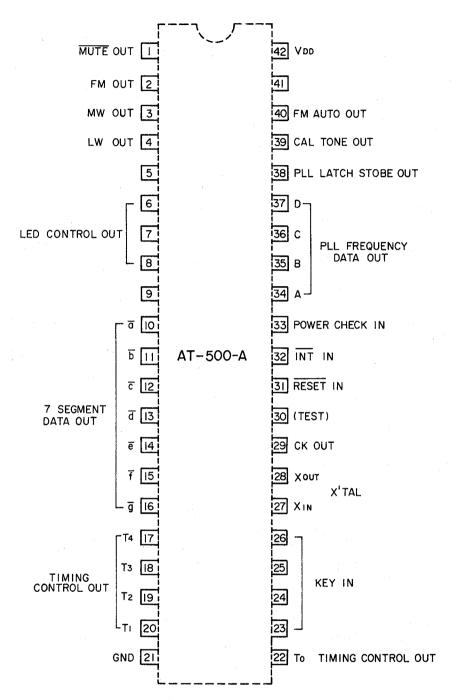


Fig. 10 AT-500-A Pin Connection (Top View)

## 4. FUNCTION OF AT-500-A TERMINALS

No.	Terminal Description	Function	No.	Terminal Description	Function
1	MUTING	H = Muting OFF	22	Т.	TIMING CONTOR
		L = Muting ON	23		
2	FM	H = FM $L = MW  or  LW$	24		Key IN
3	MW	H = MW (AM)	25		Key III
	1AT AA	L = FM or LW	26		
4	LW	H = LW L = FM or MW	27	X IN	
5			28	X OUT	
6			29	CK	
7		LED Control	30	(TEST)	
8		DDD CONTO	31	RESET	L = IN THE BEGINING
9			32	ĪNT	
10	<u>a</u>		33	POWER CHECK	H = POWER OFF
11	b				L = POWER ON
12	C		34	A	
13	d	7 Segment Data	35	В	PLL FREQUENCY
14	e		36	C	DATA
15	f		37	D	
16	g		38	PLL LATCH STROBE	
17	T <sub>4</sub>		39	CAL TONE	H = CAL TONE
18	$T_3$	TIMING CONTROL  Display Control	40	FM AUTO	H = FM AUTO
19	T <sub>2</sub>	LED Control	41		
20	T <sub>1</sub>	Key Matrix	42	Vdd	
21	GND				

Fig. 11 Function of AT-500-A Terminals

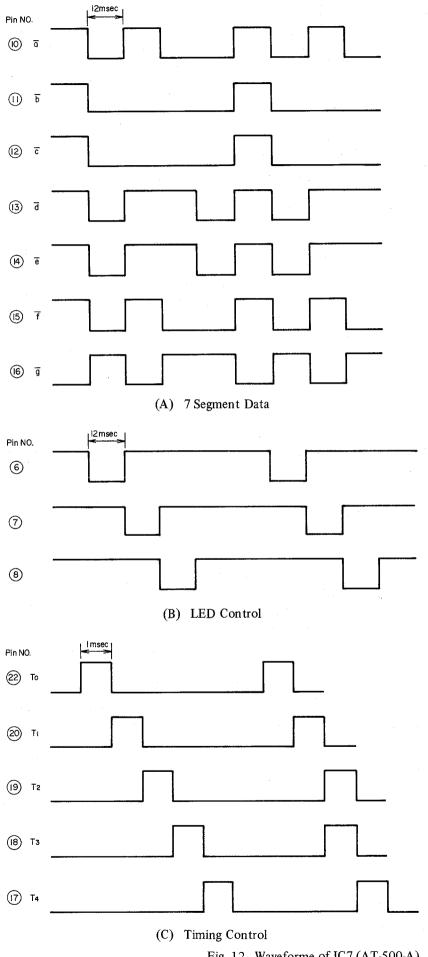


Fig. 12 Waveforme of IC7 (AT-500-A)

#### 5. MUTE CIRCUIT OPERATION

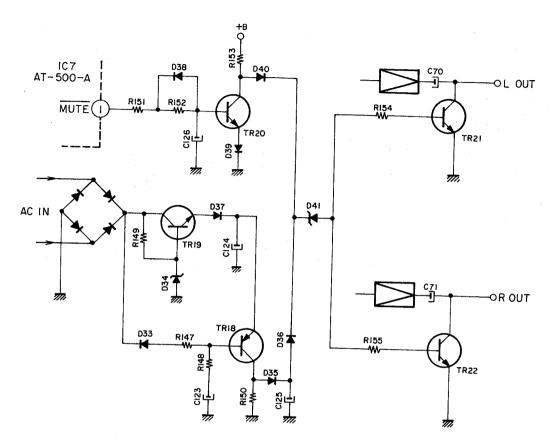


Fig. 13 Mute Circuit

- 1) Mute Operation When Power is Switched On When power is switched on, the base current of TR18 flows until C123 is charged so TR18 is on. While TR18 is on, TR21 and TR22 are turned on. and no line output is produced.

  When C123 has been charged, TR18 is turned off causing TR21 and TR22 to be turned off.
- 2) Mute Operation When Power is Switched Off When power is switched off, the voltage built up in C124 is applied to TR18 to on TR18. While TR18 is on, TR21 and TR22 are on, and no line output is produced. When C124 has been dis-
- charged, TR18 is turned off so that TR21 and TR22 are turned off.
- 3) MUTE (AT500A ①) at Low Level
  When MUTE (AT500A ①) goes low, the voltage
  charged in C126 is discharged through D38 so that
  TR20 is turned off. Thus, TR21 and TR22 are
  on, and the line output is grounded.
- 4) MUTE (AT500A ①) at High Level When MUTE (AT500A ①) goes high, C126 is charged, and TR20 is turned on. Thus, TR21 and TR22 are turned off.

#### 6. LED DRIVE CIRCUIT OPERATION

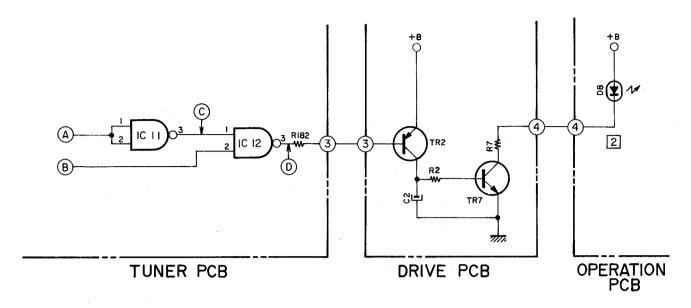
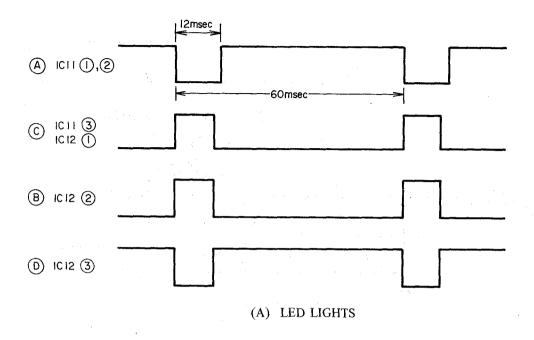


Fig. 14 LED Drive Circuit

- 1) When a "L" signal is input to Point (a) and a "H" signal to Point (b), Point (c) goes "H", and Point (d) goes "L".
  - When Point ① goes "L", TR2 is turned on so that TR7 is turned on and LED lights.
- 2) When a "H" signal is input to Point (A) and Point (B), or a low "L" signal to Point (A) and Point (B), Point (D) goes "H". When Point (D) goes "H", TR2 is turned off so that TR7 is deenergized and LED goes out.
- 3) Waveforms at Points (A), (B), (C), and (D) are shown in Fig. 15.
  - LED repeats on, off, and on, but it appears continuously lit to the human eyes because the on and off is repeated so fast.



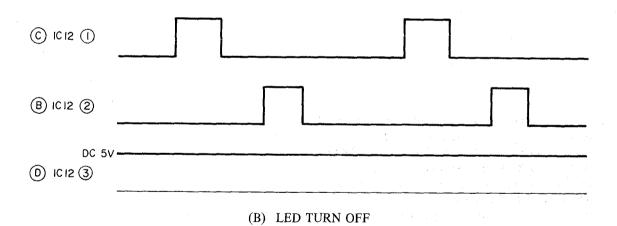


Fig. 15 Waveforms at Points (A), (B), (C) and (D)

#### 7. BACK UP CIRCUIT OPERATION

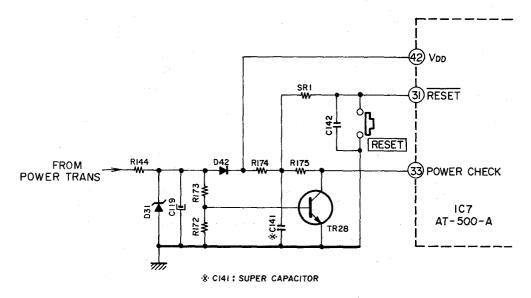


Fig. 16 Back Up

- 1) When the power switch is pushed on, TR28 is turned on. C141 is charged by the current that flows through R174. At this time, POWER CHECK (AT500A ③) goes low.

  RESET (AT500A ①), which is low at first, goes
  - "H" when C142 is charged.
- 2) When the power switch is pushed off, TR28 is turned off. The voltage charged in C141 is applied to POWER CHECK (AT500A ③) via R175 so that POWER CHECK (AT500A ③) goes "H". As POWER CHECK goes "H", the microcomputer (AT500A) confirms that the power switch is off, stops oscillation, and brings the set into a back up state.
- 3) When the power switch is pushed on again, TR28 is turned on. POWER CHECK (AT500A ③) goes "L". As POWER CHECK (AT500A ③) is "L", the microcomputer (AT500A) confirms that the power switch is on, and shows the back up on the display. Different from the case of Item 1), RESET (AT500A ①) does not go "L".
- \* The memory lasts 20 days if power remains off.

#### 8. KEY MATRIX

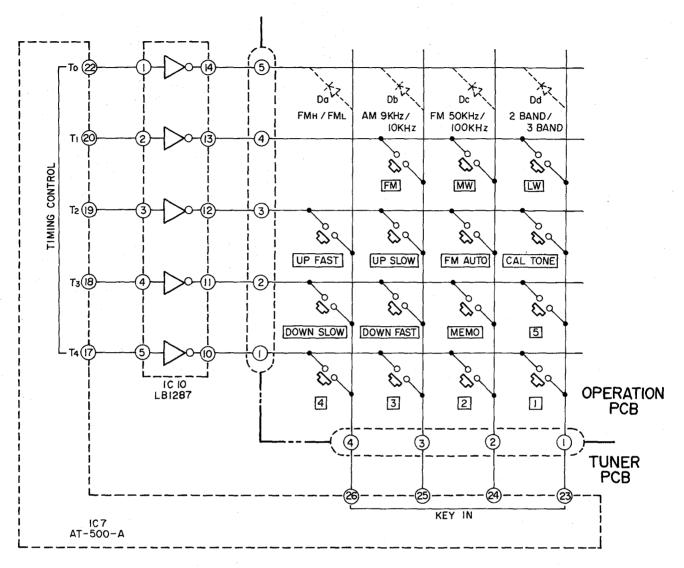


Fig. 17 Key Matrix

- 1)  $FM_H/FM_L \dots FM_L$  if diode Da is connected.
  - FM<sub>H</sub>: 87.40 MHz to 108.10 MHz
  - FM<sub>L</sub>: 76.00 MHz to 90.0 MHz
- 2) AM 9 kHz Step/10 kHz Step . . . . 10 kHz Step if diode Db is connected.

AM 9 kHz Step: 522 kHz to 1611 kHz

- AM 10 kHz Step: 530 kHz to 1610 kHz
- 3) FM 50 kHz Step/100 kHz Step . . . . 100 kHz Step if diode Dc is connected.
- 4) 2 Bands/3 Bands . . . . . 3 Bands if Dd is connected.

Destination	AM		FM
J	522 ~ 1611 kHz	( 9 kHz STEP)	76.00 ~ 90.00 MHz (100 kHz STEP)
C, A	530 ~ 1610 kHz	(10 kHz STEP)	87.40 ~ 108.10 MHz (100 kHz STEP)
U, E, S, V	522 ~ 1611 kHz	( 9 kHz STEP)	$87.40 \sim 108.10 \mathrm{MHz} (50 \mathrm{kHz}\mathrm{STEP})$
L BAND	137 ~ 362 kHz LW 522 ~ 1611 kHz MW	(10 kHz STEP) ( 9 kHz STEP)	87.40 ~ 108.10 MHz ( 50 kHz STEP)

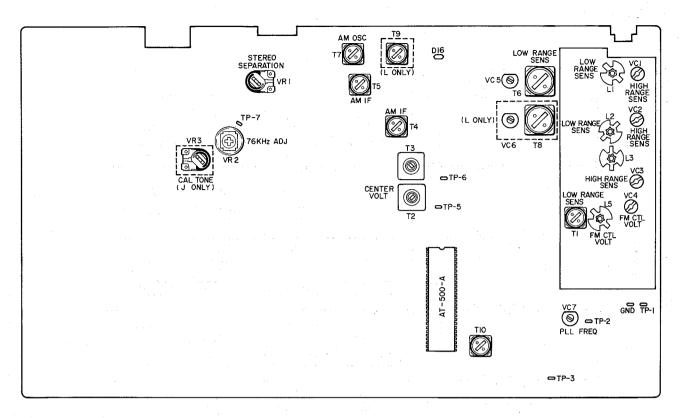


Fig. 19 Tuner PCB

#### 1. AM (AT-S210L: MW) SECTION ADJUSTMENT

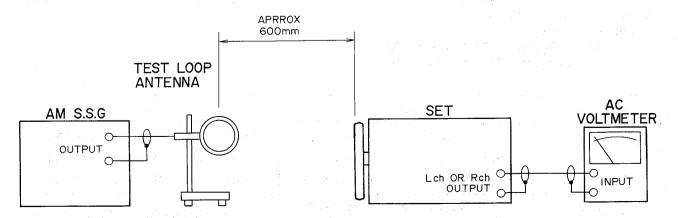


Fig. 20 Instrument Connections for AM (MW) Section Adjustment and Steps 2, 3 of LW Section Adjustment

Step	Adjustment Item	Adjustment Point	Result	Remarks
1	PLL Freq.	VC-7	Digital Display indicating Freq. + 10.7 MHz	Band SW to FM Connect Frequency Counter between TP-2 and GND (See NOTE)
2	AM (MW) OSC	Т7	710 ± 1 kHz	Band SW to AM (MW). Short D16 Connect Frequency Counter between TP-3 and GND
3	AM IF	T4, 5	Max Output	1,000 kHz, 50 dB 400 Hz (30%) input.
4	Low Range Sensitivity 600 kHz (603 kHz)	Т6	Max Output Distortion Factor: Less than 10%	600 kHz (603 kHz), 50 dB, 400 Hz (30%) input.
5	High Range Sensitivity 1,400 kHz (1,404 kHz)	VC5	Max Output Distortion Factor: Less than 10%	1,400 kHz (1,404 kHz), 50 dB 400 Hz (30%) input.
6		1		Readjust in Steps 4 and 5.
7	CAL Tone Level (J Only)	VR3		-6 ± 2 dB

**NOTE:** Digital display frequency +10.7 MHz means that when the display frequency of Digital Display is 100 MHz, it should be adjusted to 110.7 MHz.

#### 2. LW (AT-S210L only) SECTION ADJUSTMENT

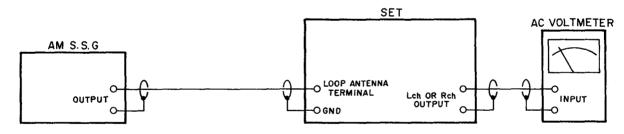


Fig. 21 Instrument Connections for Steps 2 and 3 of LW Section Adjustments

Step	Adjustment Item	Adjustment Point	Result	Remarks
1	LW OSC	Т9	538 kHz ± 1 kHz	Band SW to LW Connect a Frequency Counter between TP-3 and GND.
2	Low Range Sensitivity 155 kHz	Т8	Max Output Distortion Factor: Less than 10%	155 kHz, 50 dB, 400 Hz (30%) input.
3	High Range Sensitivity 300 kHz	VC6	Max Output Distortion Factor: Less than 10%	300 kHz, 50 dB, 400 Hz (30%) input.
4				Readjust in Steps 2 and 3.

#### 3. FM SECTION ADJUSTMENT

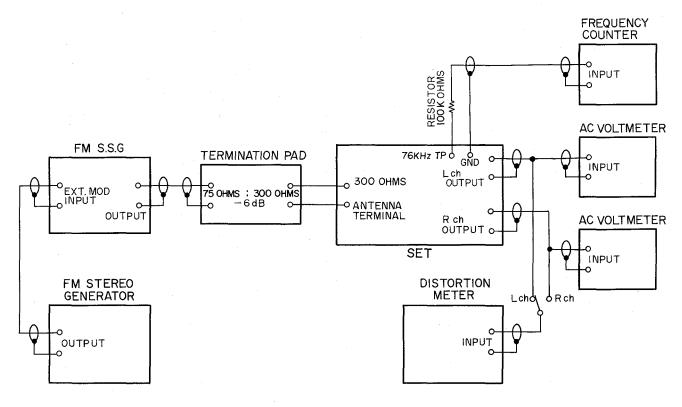


Fig. 22 Instrument Connections

Step	Adjustment Item	Adjustment Point	Result	Remarks
1	FM CTL VOLT	L5	3 ± 0.1V	Band SW to FM     Display to 87.4 MHz (76 MHz)     Connect a digital Voltmeter between     TP-1 and GND
		VC4	20 ± 0.4V	Display to 108.1 MHz (90 MHz) same as above.
2	PLL Freq.	VC7	Digital Display Indicating Frequency + 10.7 MHz	Connect a Frequency counter between TP2 and GND (See NOTE 1).
3	Center Volt	T2	TP5, 6	Connect a Tuning Meter between TP5 and TP6.     Tunes only noise without interference from broadcasting (See NOTE 2)
4	MPX Free Running Frequency	VR2	76 kHz ± 0.2 kHz	Connect a Frequency Counter between TP7 and GND (See NOTE 3)
5	Low Range Sensitivity 88.0 MHz (78 MHz)	L1, 2 T1 (Front End)	Distortion Factor: Less than 3%	1) Mode SW to OFF 2) 88 MHz (78 MHz) less than 8 dB, 1 kHz (mono) input.
6	High Range Sensitivity 106 MHz (88 MHz)	VC1, 2, 3 (Front End)	Distortion Factor: Less than 3%	106 MHz (88 MHz), less than 8 dB, 1 kHz (mono) input.
7				Readjust in Steps 5 and 6.
8	Stereo Separation	VR1	More than 40 dB	98 MHz (84 MHz), 60 dB, 1 kHz (Stereo 100%) Lch (Rch) input. Maximum output of Rch (Lch).

NOTES: 1. Digital Display frequency +10.7 MHz means that when the display frequency of Digital Display is 100 MHz, it should be adjusted to 110.7 MHz.

- 2. For the Center Meter should be used the tuning meter and the like available as a part of the other models.
- 3. When connecting a Frequency Counter, connect from TP via 100 kohms resistor.
- 4. When the distortion factor of sensitivity still does not comply with the data specifications, adjust by turning the Front end IF Coil core, but not more than 1/2 turn.

## VIII. CLASSIFICATION OF VARIOUS P.C BOARDS

#### 1. P.C BOARD TITLES AND IDENTIFICATION NUMBERS

#### 1) Model AT-S210

P.C Board Title	P.C Board Number	Notes
Tuner P.C Board	A3033A501A	U
Tuner P.C Board	A3033A502A	C, A
Tuner P.C Board	A3033A503A	E, S, V
Operation P.C Board	A3033A501B	U
Operation P.C Board	A3033A502B	C, A
Operation P.C Board	A3033A503B	E, S, V
Drive P.C Board	A3033B506A	
Power Switch P.C Board	A3033B506B	

#### 2) Model AT-S210L

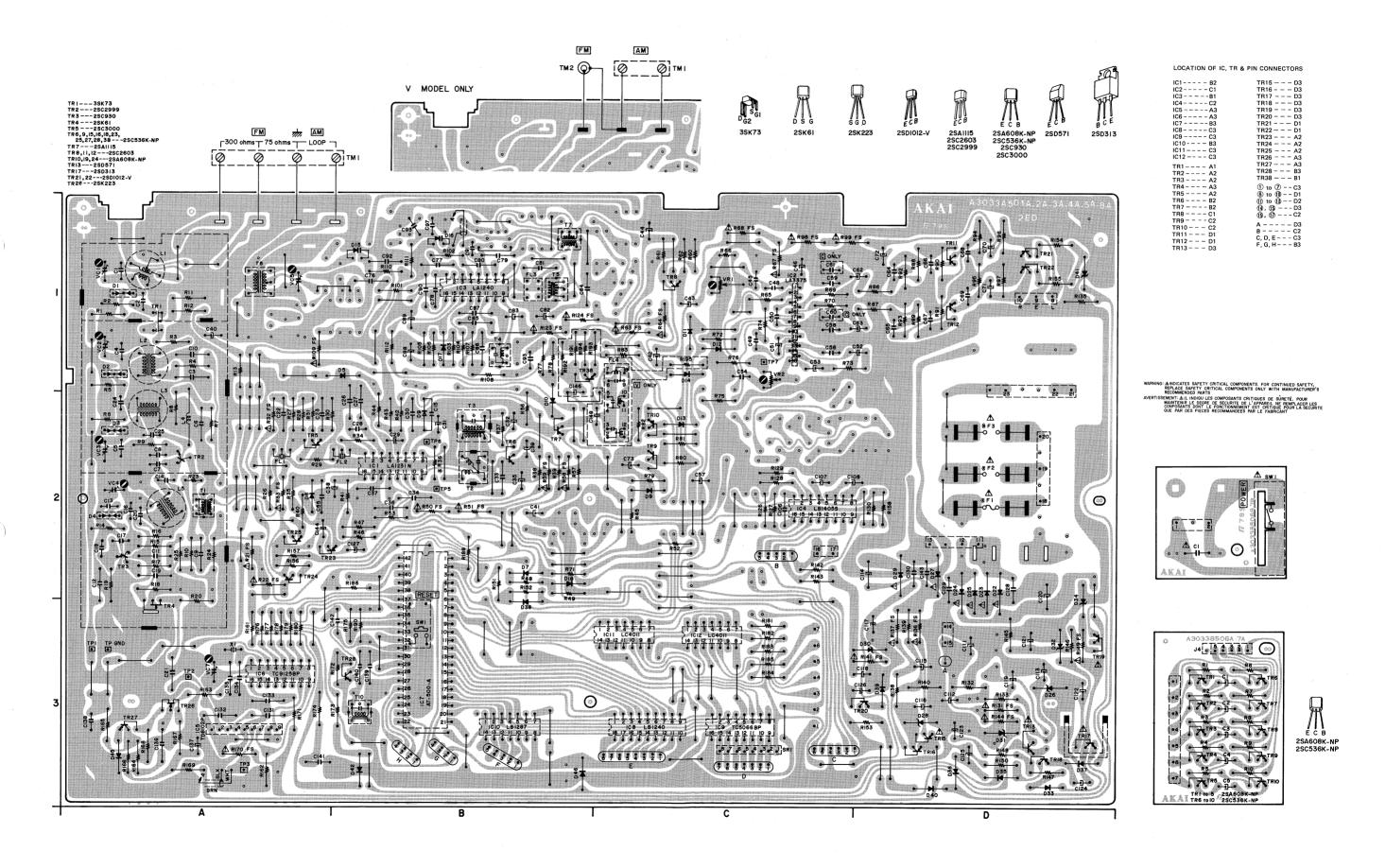
P.C Board Title	P.C Board Number	Notes
Tuner P.C Board	A3033A505A	-
Operation P.C Board	A3033A505B	
Drive P.C Board	A3033B506A	
Power Switch P.C Board	A3033B506B	

#### 3) Model AT-S210J

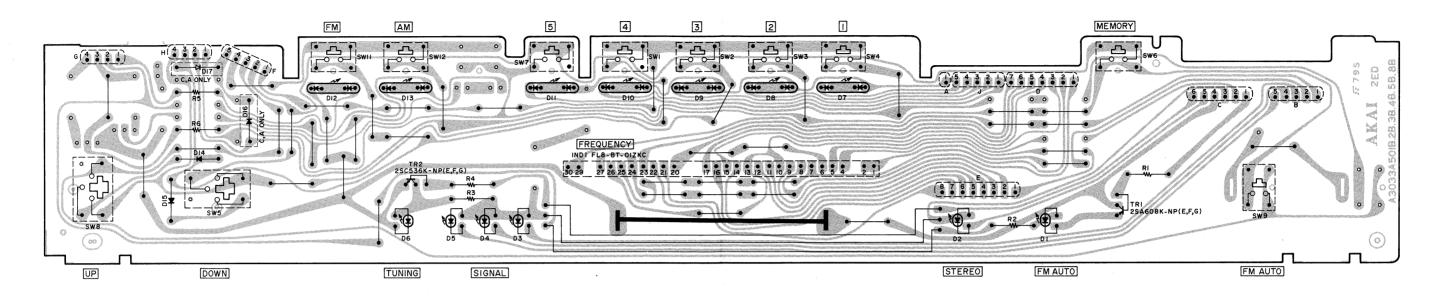
P.C Board Title	P.C Board Number	Notes
Tuner P.C Board	A3033A504A	
Operation P.C Board	A3033A504B	
Drive P.C Board	A3033B506A	
Power Switch P.C Board	A3033B506B	

#### 2. MODEL AT-S210 COMPOSITION OF VARIOUS P.C BOARD

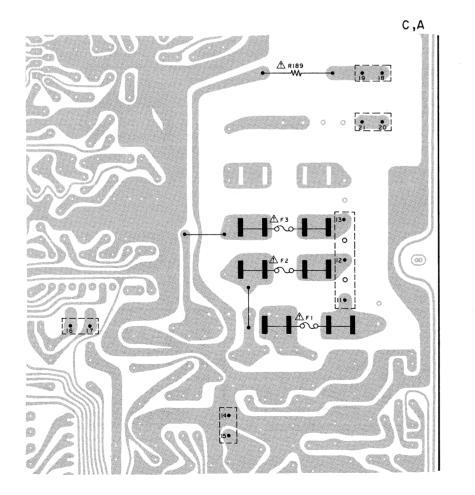
1) TUNER P.C BOARD A3033A501A (U), A3033A502A (C, A), A3033A503A (E, S, V) / POWER SWITCH P.C BOARD A3033B506B (U) / DRIVE P.C BOARD A3033A506A

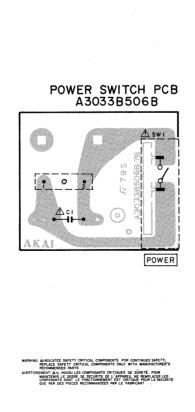


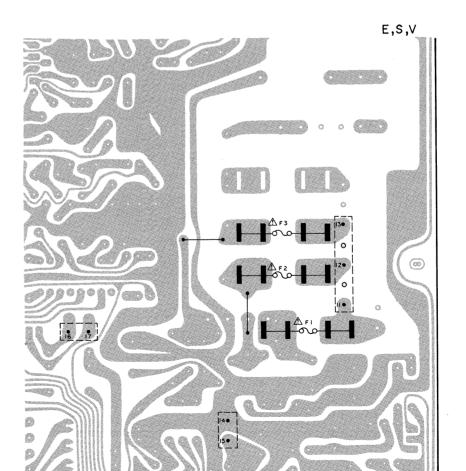
#### 2) OPERATION P.C BOARD A3033A501B (U), A3033A502B (C, A), A3033A503B (E, S, V)



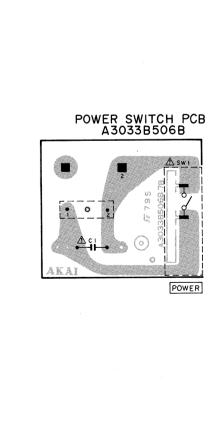
#### 3) TUNER P.C BOARD A3033A502A (C, A) / POWER SWITCH P.C BOARD A3033B506B (C, A)





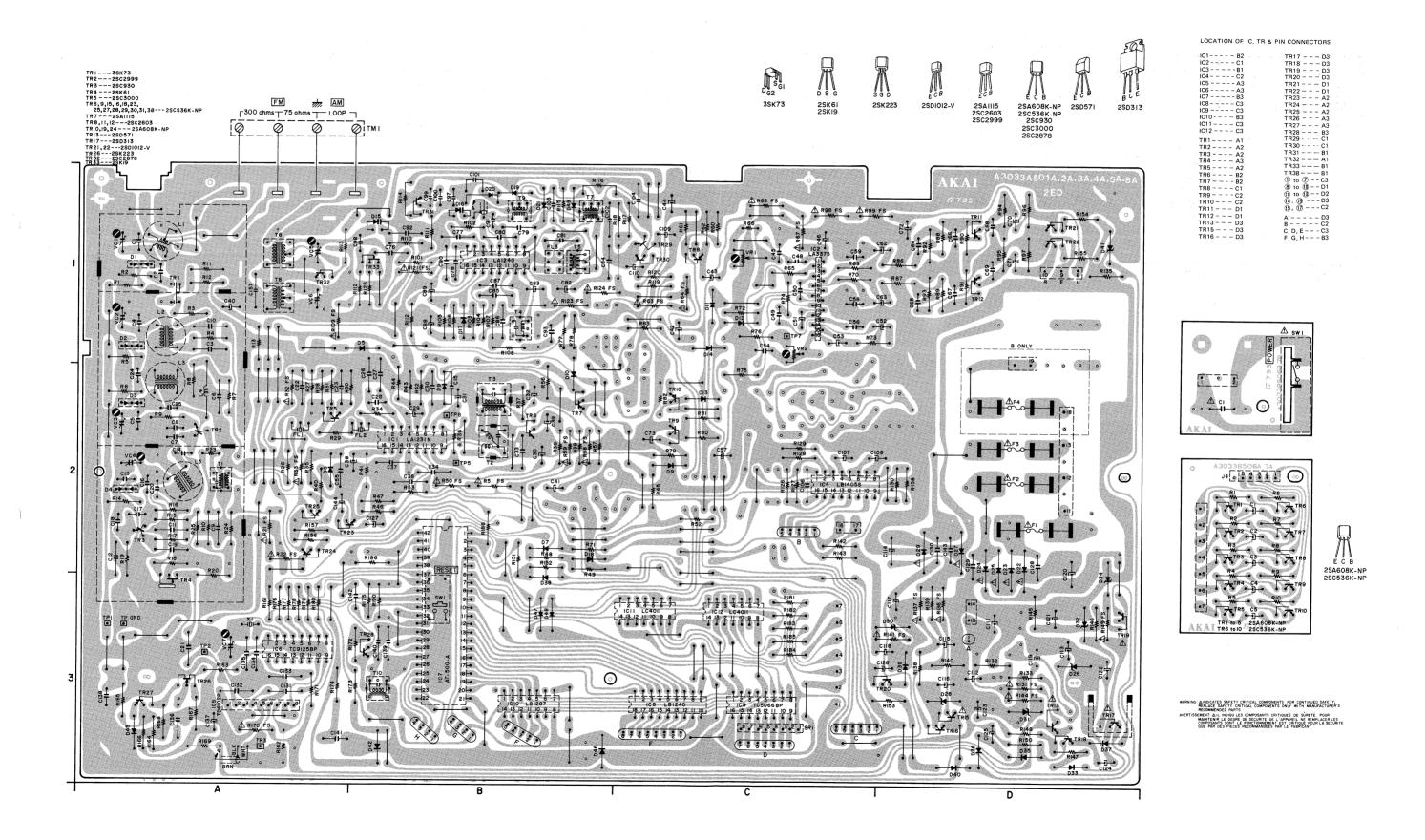


4) TUNER P.C BOARD A3033A503A / POWER SWITCH P.C BOARD A3033B506B (E, S, V)

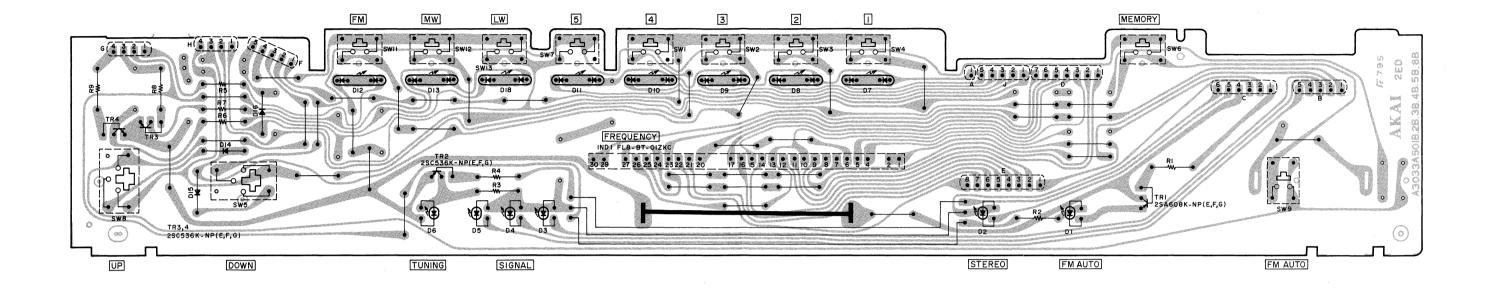


#### 3. MODEL AT-S210L COMPOSITION OF VARIOUS P.C BOARD

#### 1) TUNER P.C BOARD A3033A505A / POWER SWITCH P.C BOARD A3033B506B / DRIVE P.C BOARD A3033A506A

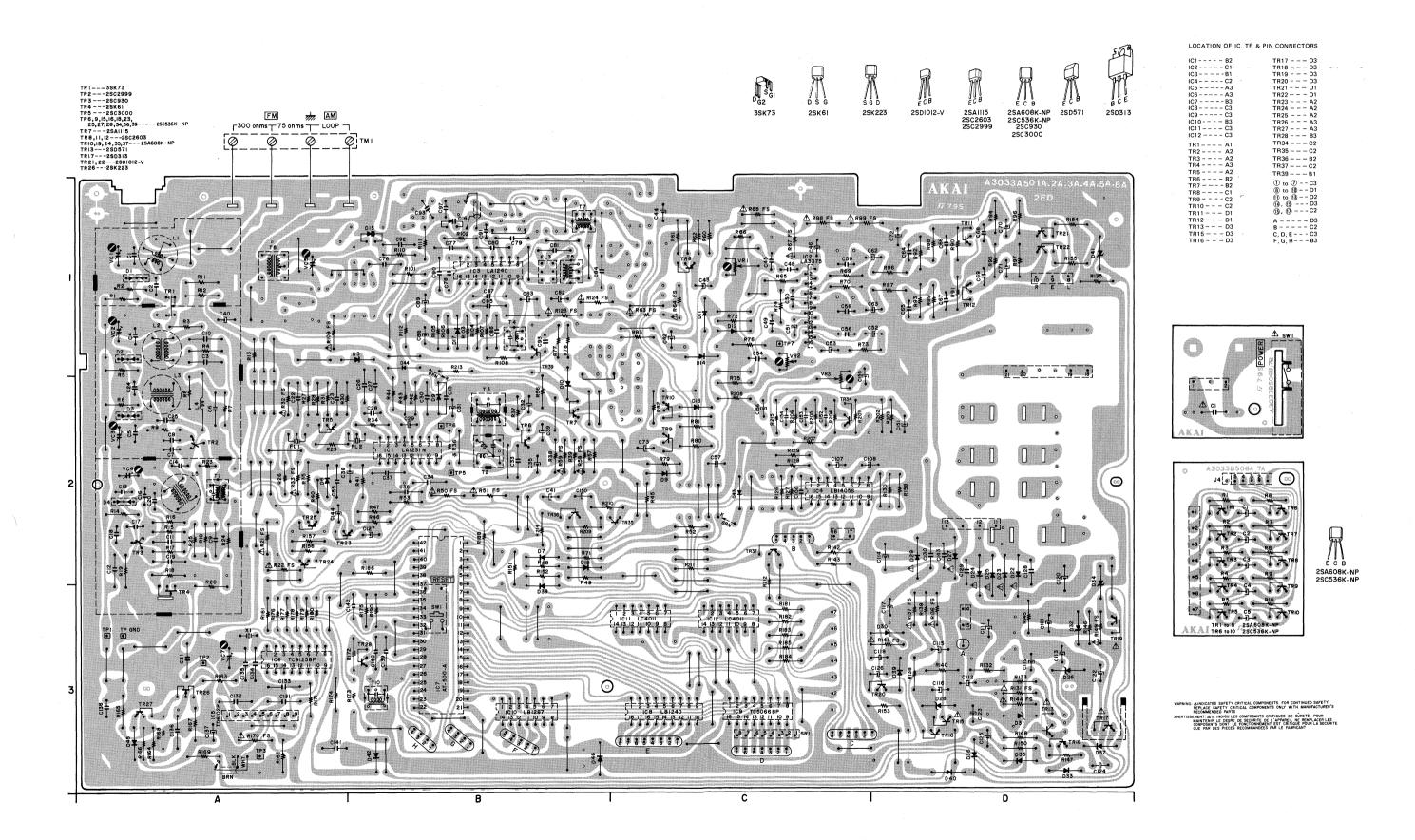


#### 2) OPERATION P.C BOARD A3033A505B

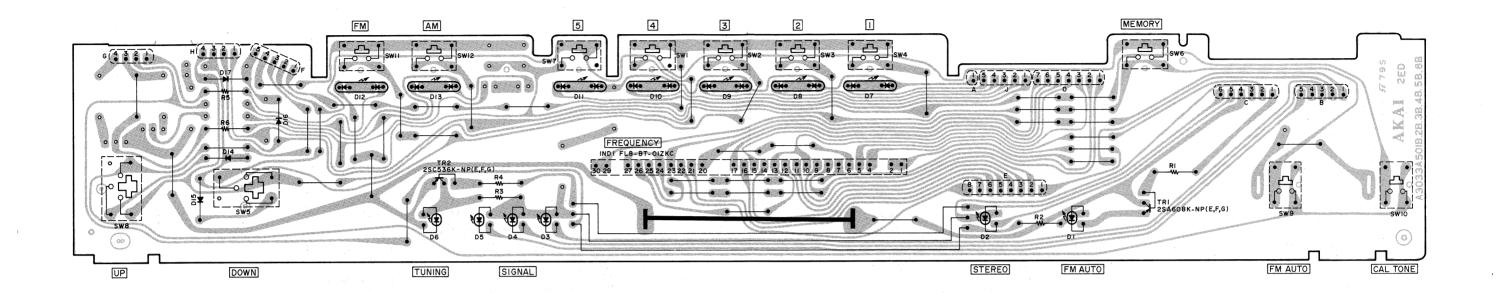


#### 4. MODEL AT-S210J COMPOSITION OF VARIOUS P.C BOARD

1) TUNER P.C BOARD A3033A504A / POWER SWITCH P.C BOARD A3033B506B / DRIVE P.C BOARD A3033B506A



#### 2) OPERATION P.C BOARD A3033A504B





#### SECTION 2

## SERVICE MANUAL

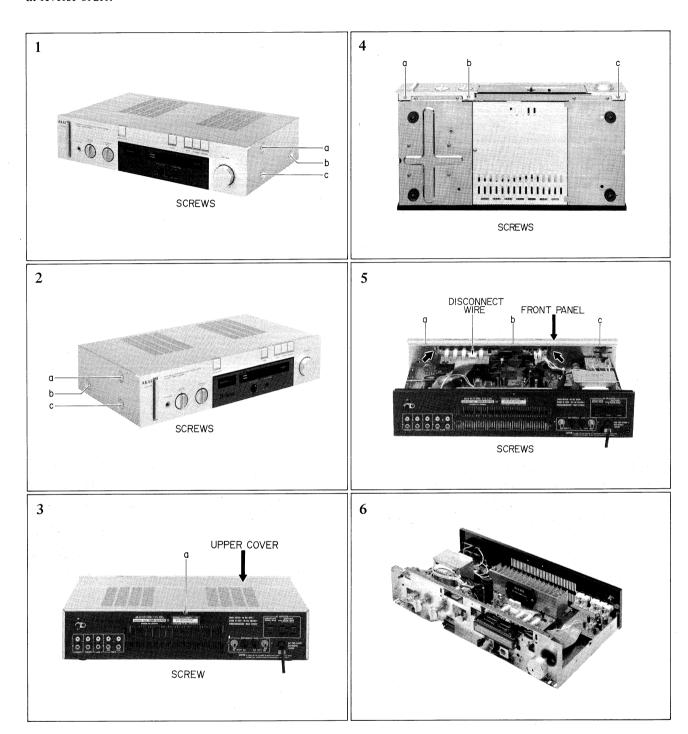
## MODEL AM-U210/J

#### TABLE OF CONTENTS

I.	SPECIFICATIONS	
П.	DISMANTLING OF UNIT	33
III.	CONTROLS	34
	1. MODEL AM-U210	34
	2. MODEL AM-U210J	35
IV.	PRINCIPAL PARTS LOCATION	36
	1. MODEL AM-U210	36
	2. MODEL AM-U210J	37
V.	VOLTAGE CONVERSION	38
VI.	POWER METER SENSITIVITY ADJUSTMENT	39
VII.	CLASSIFICATION OF VARIOUS P.C BOARDS	
	1. P.C BOARD TITLES AND IDENTIFICATION NUMBERS	40
	2. MODEL AM-U210; COMPOSITION OF VARIOUS P.C BOARDS	4
	3. MODEL AM-U210J; COMPOSITION OF VARIOUS P.C BOARDS	

For basic adjustments, measuring methods, and operating principles, refer to GENERAL TECHNIC  $^{AL}$  MANUAL.

In case of trouble, etc. necessitating dismantling, please dismantle in the order shown in the photographs. Reassemble in reverse order.



#### III. CONTROLS

#### 1. MODEL AM-U210

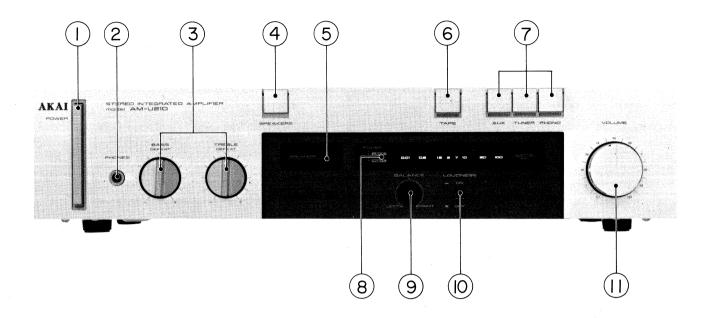


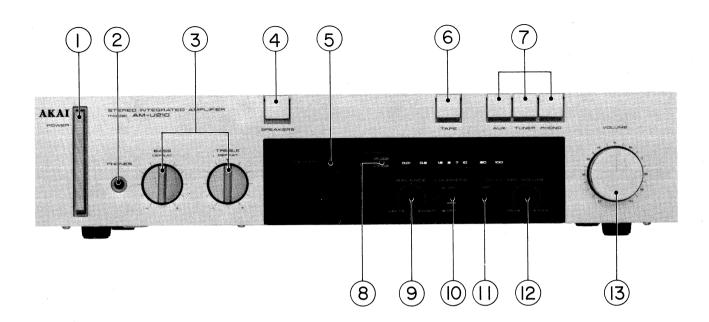


Fig. 1 Controls (AM-U210)

- 1. POWER SWITCH
- 2. HEADPHONE JACK (PHONES)
- 3. TONE CONTROLS
- 4. SPEAKERS SWITCH
- 5. SPEAKERS INDICATOR
- 6. TAPE SWITCH WITH INDICATOR
- 7. INPUT SELECTOR SWITCHES WITH INDICATORS
- 8. FLD POWER INDICATOR
- 9. STEREO BALANCE CONTROL
- 10. LOUDNESS SWITCH
- 11. VOLUME CONTROL

- 12. GROUND TERMINAL ( ///// )
- 13. SPEAKER TERMINALS (Right and Left)
- 14. AC OUTLETS (Some models are not equipped with this facility.)
- 15. PHONO JACKS
- 16. TUNER JACKS
- 17. AUX JACKS
- 18. TAPE SYSTEM REC/PLAY JACKS
- POWER CORD (Some models are equipped with an AC inlet instead of a power cord. Connect with an appropriate power cord.)

#### 2. MODEL AM-U210J



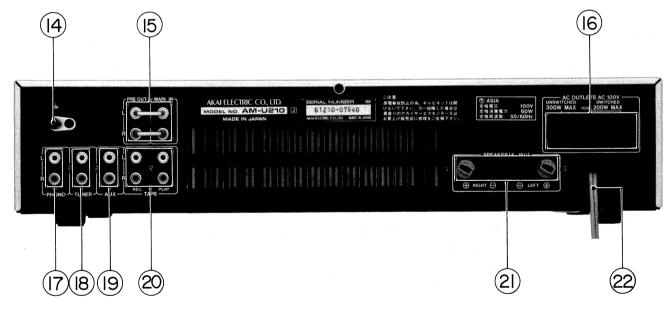


Fig. 2 Controls (AM-U210J)

- 1. POWER SWITCH
- 2. HEADPHONE JACK (PHONES)
- 3. TONE CONTROLS
- 4. SPEAKER SWITCH
- 5. SPEAKER INDICATOR
- 6. TAPE SWITCH WITH INDICATOR
- 7. INPUT SELECTOR SWITCH WITH INDICATORS
- 8. FLD POWER INDICATOR
- 9. STEREO BALANCE CONTROL
- 10. LOUDNESS SWITCH
- 11. MIC JACK (MIC)

- 12. MIC VOLUME CONTROL (MIC VOLUME)
- 13. VOLUME CONTROL
- 14. GROUND TERMINAL ( //// )
- 15. PRE OUT and MAIN IN JACKS
- 16. AC OUTLETS
- 17. PHONO JACKS
- 18. TUNER JACKS
- 19. AUX JACKS
- 20. TAPE SYSTEM REC/PLAY JACKS
- 21. SPEAKER TERMINALS (Right and Left)
- 22. POWER CORD

#### IV. PRINCIPAL PARTS LOCATION

#### 1. MODEL AM-U210

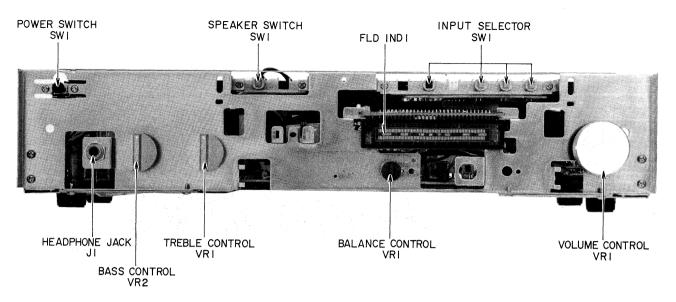


Fig. 3 Front View

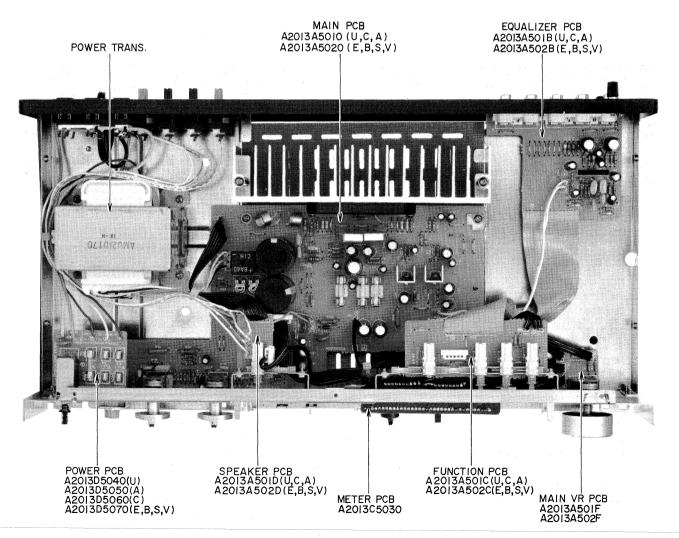


Fig. 4 Top View

### 2. MODEL AM-U210J

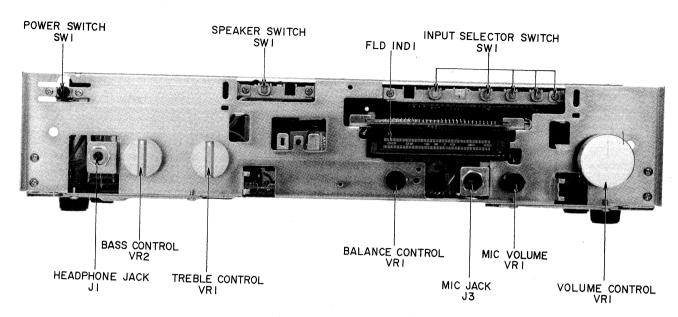


Fig. 5 Front View

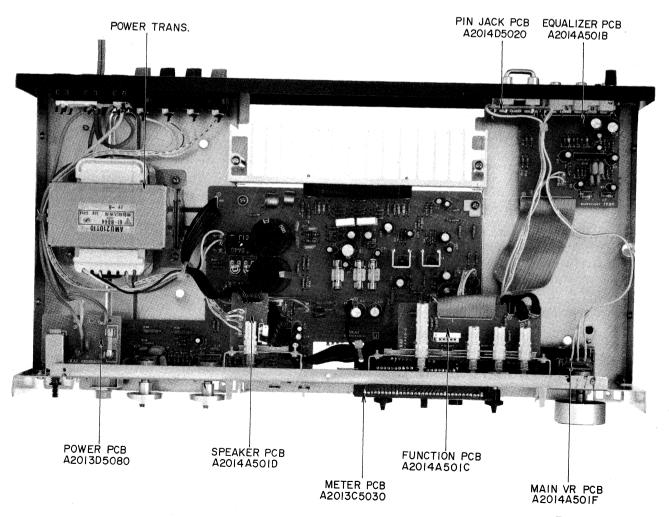
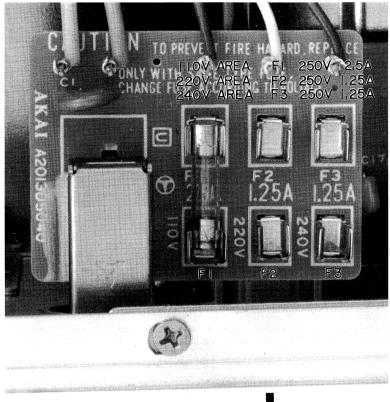


Fig. 6 Top View



**↓** FRONT

Fig. 7 Voltage Conversion (U Model Only)

Models for JAPAN, Canada, USA, Europe, UK and Australia are not equipped with this facility.

Each machine is preset at the factory according to destination, but some machines can be set to 110V, 220V or 240V as required.

If voltage change is necessary, this can be accomplished as follows.

- 1. Disconnect the power cord.
- 2. Loosen the holding screws and remove the top panel.
- 3. Remove the Line Voltage Fuse and insert the required Line Voltage Fuse onto the proper Fuse Holder, explicitly following the printed instructions.

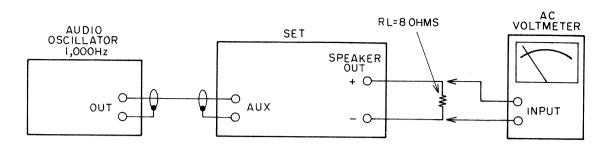


Fig. 8 Instrument Connections

Connect the load resistors (RL = 8 ohms) to Speaker terminals.

Then apply a 1 kHz signal to the AUX input terminals, adjusting the input level so as to obtain the rated output voltage level (8.94V) at both ends of the load resistor. Adjust VR3 (left channel) and VR3b (right channel) on the Main Amp P.C Board so that the 10 Watts in the Power Meter reading.

### VII. CLASSIFICATION OF VARIOUS P.C BOARDS

#### 1. P.C BOARD TITLES AND IDENTIFICATION NUMBERS

#### 1) Model AM-U210

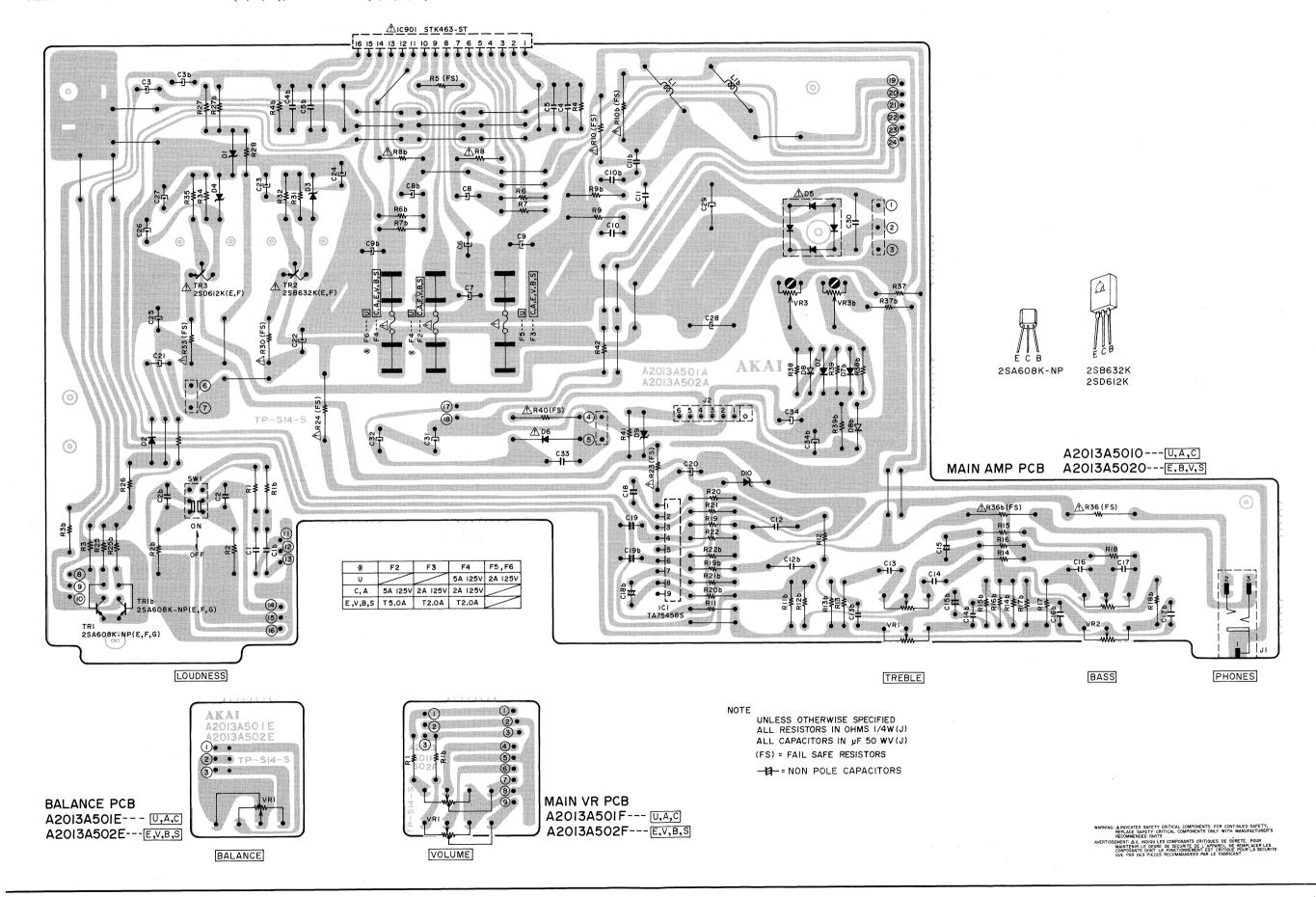
P.C Board Title	P.C Board Number	Notes
Main Amp P.C Board	A2013A5010	U, C, A
Main Amp P.C Board	A2013A5020	E, B, S, V
Equalizer P.C Board	A2013A501B	U, C, A
Equalizer P.C Board	A2013A502B	E, B, S, V
Function P.C Board	A2013A501C	U, C, A
Function P.C Board	A2013A502C	E, B, S, V
Speaker P.C Board	A2013A501D	U, C, A
Speaker P.C Board	A2013A502D	E, B, S, V
Balance P.C Board	A2013A501E	U, C, A
Balance P.C Board	A2013A502E	E, B, S, V
Main Volume P.C Board	A2013A501F	U, C, A
Main Volume P.C Board	A2013A502F	E, B, S, V
LED (1) P.C Board	A2013A501G	U, C, A
LED (1) P.C Board	A2013A502G	E, B, S, V
LED (2) P.C Board	A2013A501H	U, C, A
LED (2) P.C Board	A2013A502H	E, B, S, V
Meter P.C Board	A2013C5030	
Power P.C Board	A2013D5040	U
Power P.C Board	A2013D5050	A
Power P.C Board	A2013D5060	С
Power P.C Board	A2013D5070	E, B, S, V
Terminal P.C Board	A2013D5090	V

#### 2) Model AM-U210J

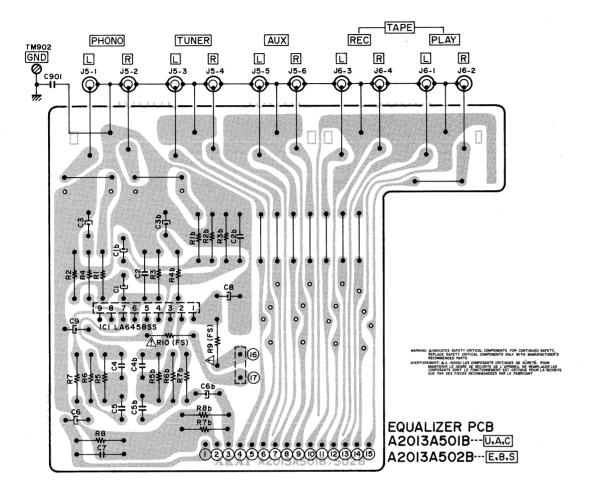
P.C Board Title	P.C Board Number	Notes
Main Amp P.C Board	A2014A5010	
Equalizer P.C Board	A2014A501B	
Function P.C Board	A2014A501C	
Speaker P.C Board	A2014A501D	
Balance P.C Board	A2014A501E	
Main Volume P.C Board	A2014A501F	
LED (1) P.C Board	A2014A501G	
LED (2) P.C Board	A2014A501H	
MIC P.C Board	A2014A501J	
Pin Jack P.C Board	A2014D5020	
Meter P.C Board	A2013C5030	
Power P.C Board	A2013D5080	

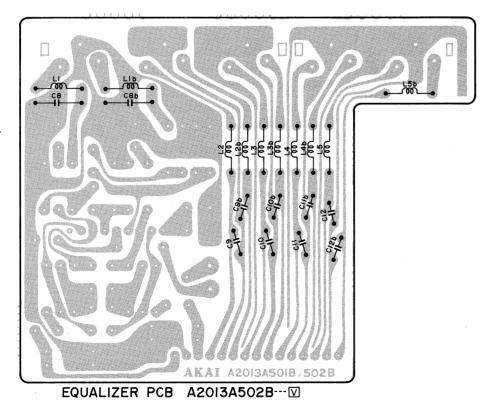
#### 2. MODEL AM-U210 COMPOSITION OF VARIOUS P.C BOARDS

1) MAIN AMP P.C BOARD A2013A5010 (U, C, A), A2013A5020 (E, B, S, V) / BALANCE P.C BOARD A2013A501E (U, C, A), A2013A502E (E, B, S, V) / MAIN VR P.C BOARD A2013A501F (U, C, A), A2013A502F (E, B, S, V)

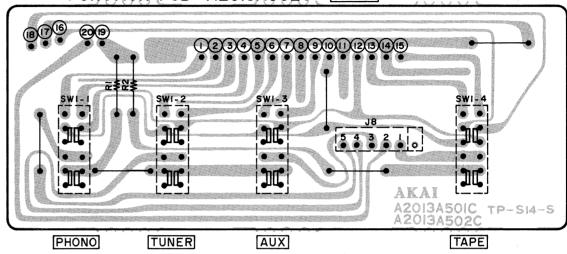


2) EQUALIZER P.C BOARD A2013A501B (U, C, A), A2013A502B (E, B, S, V) / FUNCTION P.C BOARD A2013A501C (U, C, A), A2013A502C (E, B, S, V) / LED (1) P.C BOARD A2013A501G (U, C, A), A2013A502G (E B, S, V)

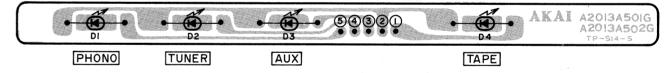




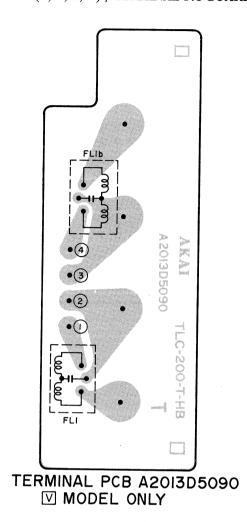
A2013A501C---U.A.C FUNCTION PCB A2013A502C---E.V.B.S



A2013A50IG--- U.A.C LED(1) PCB A2013A502G--- E.V.B.S



3) SPEAKER P.C BOARD A2013A501D (U, C, A), A2013A502D (E, B, S, V) / LED (2) P.C BOARD A2013A501H (U, C, A), A2013A502H (E, B, S, V) / TERMINAL P.C BOARD A2013D5090 (V)



SPEAKER PCB
A20I3A50ID···U·A·C
A20I3A502D···E·V·B·S

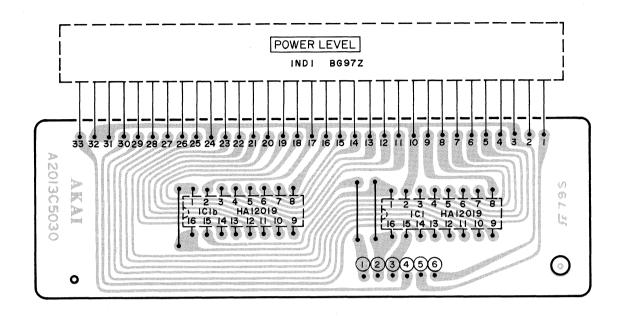
LED(2) PCB
A20I3A50IH····E·V·B·S

A20I3A502H····E·V·B·S

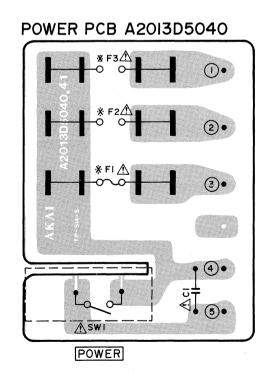
SPEAKERS

OPE
SPEAKERS

#### 4) METER P.C BOARD A2013C503D



#### 5) FUSE P.C BOARD A2013D5040 (U)



*	1107	220V	240V
FI	2,5A 250V		
F2		1.25A 250V	
F3			1.25A 250V

WARNING: ANDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY,
BEFLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURIER'S
RECOMMENDED PARTS
AVERTISSEMENT: ALL INDIOU LES COMPOSANTS CRITICUES DE SURETÉ, POUR
MAINTENIR LE DEGRE DE SECURITÉ DE L'APPANELL NE RAMITACENT LES
CHIPPOSANTS D'ANTI-LE COMMANDES PAR LE FARRICANT LA SECURITE
COMPOSANTS D'ANTI-LE COMMANDES PAR LE FARRICANT.

t/012U-MA

6) fuse P.C board aloisdsoso (a)  $\$  fuse P.C board aloisdsoso (c)  $\$  fuse P.C board aloisdsoso (c)  $\$  fuse P.C board

POWER PROIBDEO70

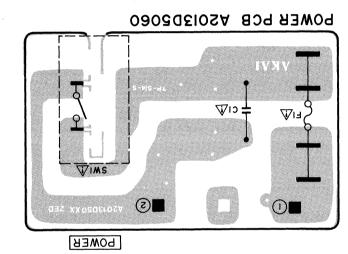
APPLIANCE

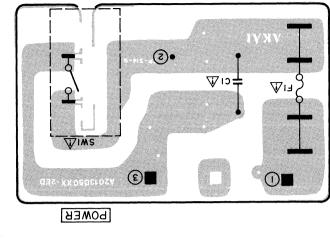
APPLIANCE

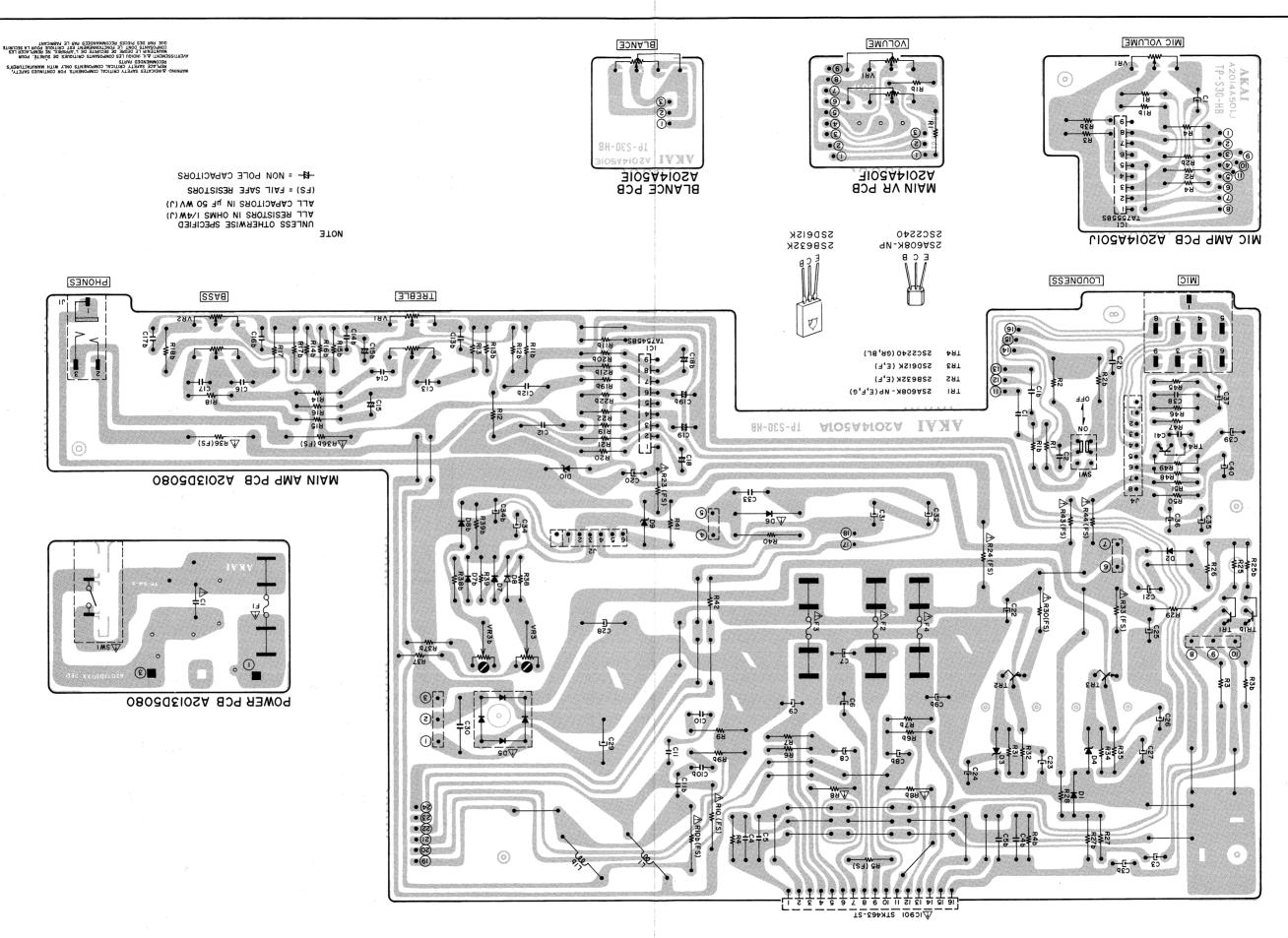
SWILL

POWER

POWER

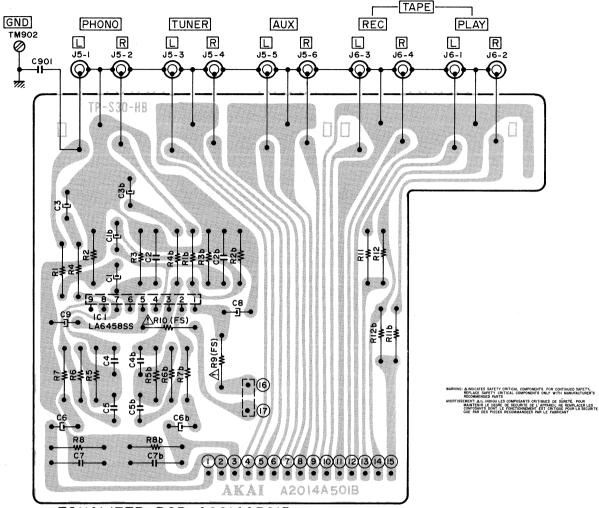






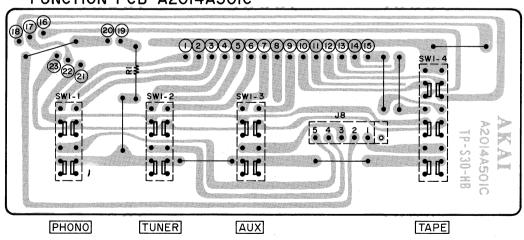
1) WYIN YMP P.C BOARD A2014A501A / BALANCE P.C BOARD A2014A501E / MAIN VR P.C BOARD A2014A501F / MIC P.C BOARD A2014A5011 / POWER P.C BOARD A2013D5080

# 2) EQUALIZER P.C BOARD A2014A501B / FUNCTION P.C BOARD A2014A501C / LED (1) P.C BOARD A2014A501G

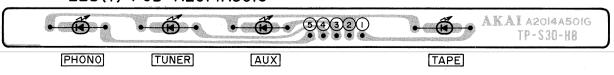


EQUALIZER PCB A2014A501B

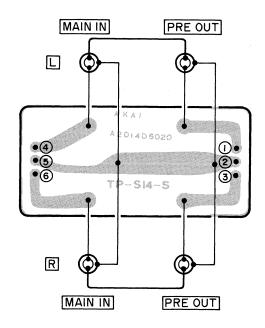
### FUNCTION PCB A2014A501C



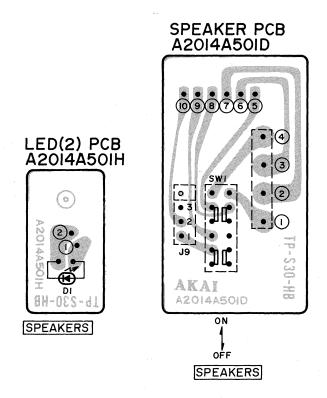
#### LED(I) PCB A2014A50IG



#### 3) PIN JACK P.C BOARD A2014D5020



### 4) SPEAKER P.C BOARD A2014A501D / LED (2) P.C BOARD A2014A501H



#### **SECTION 3**

# **PARTS LIST**

#### TABLE OF CONTENTS

I.	MODEL AT-S210/L/J	
	RECOMMENDED SPARE PARTS	53
	1. TUNER P.C BOARD BLOCK	54
	2. POWER SW P.C BOARD BLOCK	55
	3. ASSEMBLY BLOCK	56
	4. FINAL ASSEMBLY BLOCK	58
П.	MODEL AM-U210/J	
	RECOMMENDED SPARE PARTS	59
	1. MAIN P.C BOARD BLOCK	60
	2. POWER P.C BOARD BLOCK	61
	3. METER P.C BOARD BLOCK	61
	4. ASSEMBLY BLOCK	62
	5. FINAL ASSEMBLY BLOCK	64
IN)	DEX	
	1. MODEL AT-S210/L/J	65
	2. MODEL AM-U210/J	66

Resistor and Capacitor which is not listed in this parts list, please refer to COMMON LIST FOR SERVICE PARTS.

#### ATTENTION

- 1. When placing an order for parts, be sure to list the parts no. model no., and description. There are instances in which if any of this information is omitted, parts cannot be shipped or the wrong parts will be delivered.
- 2. Please be careful not to make a mistake in the parts no. If the parts no. is in error, a part different from the one ordered may be delivered.
- 3. Because parts number and parts unit supply in the Preliminary Parts List may be partially changed, please use this parts list for all future reference.

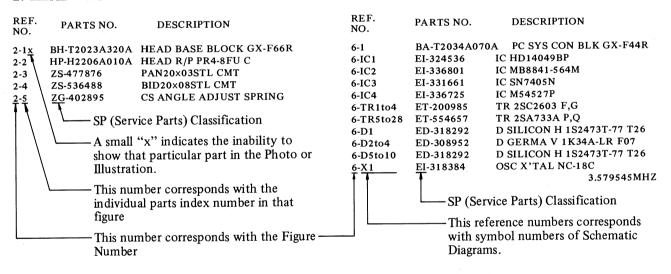
#### HOW TO USE THIS PARTS LIST

- 1. This Parts List shows the parts that are considered necessary for repairs. Other parts, such as resistors and capacitors, are shown in the "Common List for Service Parts". Select and order such parts from the "Common List for Service Parts".
- 2. The Recommended Spare Parts List shows those parts in the Parts List which are considered particularly important for service.
- 3. Parts not shown in the Parts List and "Common List for Service Parts" will not be supplied in principle.
- 4. How to read list
  - a) Mechanism Block

b) P.C Board Block

#### 2. HEAD BASE BLOCK

#### 6. SYS. CON. P.C BOARD BLOCK



5. Both the kind of part and installation position can be determined by the Parts Number. To determine where a parts number is listed, utilize Parts Index at end of Parts List. It is necessary first of all to find the Parts Number. This can be accomplished by using the Reference Number listed at right of parts number in the Parts Index.

#### WARNING

⚠ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.

#### **AVERTISSEMENT**

⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SURETE. POUR MAINTENIR LE DEGRE DE SECURITE DE L'APPAREIL NE REMPLACER LES COMPOSANTS DONT LE FONCTIONNEMENT EST CRITIQUE POUR LA SECURITE QUE PAR DES PIECES RECOMMANDEES PAR LE FABRICANT.

## I. MODEL AT-S210/L/J

#### RECOMMENDED SPARE PARTS

ET-200558

TR 2SA1115 E,F

Because, if the parts listed below are on hand, almost any repair can be accomplished, we suggest that you stock these Recommended Spare Parts Items.

NO.	PARTS NO.	DESCRIPTION	NO.	PARTS NO.	DESCRIPTION
1	BT-336883	△ TRANS POWER AT-S210T-10 (J)	69	ET-322778	TR 2SA608K-NP E,F,G
2	BT-336884	△ TRANS POWER AT-S210T-20 (A)	70	ET-200506	TR 2SC2603 F
3	BT-336859	△ TRANS POWER AT-S210T-30 (C)	71	ET-336869	TR 2SC2999 C,D
4	BT-336860	△ TRANS POWER AT-S210T-40 (E,V)	72	ET-336935	TR 2SC3000 E,F
5	BT-336861	△ TRANS POWER AT-S210T-50 (B,S)	73	ET-322775	TR 2SC536K-NP E,F,G
6	BT-336862	⚠ TRANS POWER AT-S210T-70 (U)	74	ET-618873	TR 2SC930 E,F
. 7	EC-336865	C S-FIX H CTZ51C 3.0-10	75	ET-328437	TR 2SD1012-V F,G
8	EC-336808	C S-FIX H TZ03P450E 6.8-45	76 77	ET-452531 ET-655356	TR 2SD313 E,F TR 2SD571 L,M
9 10	EC-330692 ED-322772	C S-FIX H TZ03R200E 4.2-20 D LED SLP-155D-01 RED	78	EV-315416	R S-FIX H D8 3P 103
11	ED-322772 ED-322773	D LED SLP-153D-01 RED D LED SLP-255D-01 GRN	79	EV-315414	R S-FIX H D8 3P 203 (J)
12	ED-336786	D LED SLP-271D GRN	80	EV-483388	R S-FIX H SR19R 3P 0.15W 103
13	ED-336805	D SILICON DS135D-KB1 200/1.0A			
14	ED-200469	D SILICON H DS448 FA5 F10			
15	ED-330207	D SILICON H DS448BT T26			
16	ED-324197	D VARACTOR KV1226X DOUBLE			
17	ED-336832	D VARACTOR SVC211SP			
18 19	ED-316519	D ZENER H WZ-172 D ZENER H WZ-300			
20	ED-315372 ED-336944	D ZENER H WZ-300 D ZENER H 05Z16 X,Y			
21	ED-336945	D ZENER H 05Z5.1 Y,Z			
22	ED-303155	D ZENER H 05Z5.6 Z			
23	ED-336943	D ZENER-H 05Z15 Y			
24	EE-330614	ANT LOOP LA-1300Y			
25	EF-300599	△ FUSE FST3100 T 250V 0.40A			
		(F1,2) (E,B,S,V)			
26	EF-336834	<b>⚠</b> FUSE FST3100 TIME 250V 0.16A (F3) (E,B,S,V)			
27	EF-308933	△ FUSE TSC A 250V 0.20A (F2,3) (U)			
28	EF-309389	△ FUSE TSC A 250V 0.40A (F1) (U)			
29	EF-315334	△ FUSE TSC 125V 0.25A (F3) (C,A)			
30	EF-308848	△ FUSE TSC 125V 0.40A (F1,2) (C,A)			
31	EI-336866	IC AT500			
32	EI-322248	IC LA1231N			
33	EI-293185	IC LA1240			
34	EI-336793	IC LA3375			
35	EI-336794	IC LB1240 IC LB1287			
36 37	EI-336962 EI-315491	IC LB1267			
38	EI-330689	IC LC4011			
39	EI-315379	IC TC5066BP			
40	EI-336717	IC TC9125BP			
41	EI-315381	IC TD6102P			
42	EI-327074	OSC X'TAL HC-18/U 9MHZ			
43	EM-336863	IND FL 8-BT-01ZK CHARACTER			
44 45	EO-336829	COIL OSC 2 7NR-7818F 125μH COIL OSC 2 7NR-7819F 580μH (L)			
45 46	EO-336828 EO-336939	COIL VARI 2 TFEI-ANT-J (J)			
47	EO-336872	COIL VARI 2 TFEI-ANT-U			
48	EO-336871	COIL VARI 2 TFEI-OSC-U			
49	EO-336873	COIL VARI 2 TFEI-RF-1			
50	EO-336938	COIL VARI 2 TFEI-RF-2			
51	EO-336874	COIL VARI 2 25A-1253			
52 53	EO-336876 ER-336804	COIL VARI 2 25A-1254 (L) FILTER CE SFE10.7MA8 10.7MHZ			
53 54	ER-336810	FILTER CE SFEIO./MAS 10./MILZ FILTER CE SFZ459A3L 0.459MHZ			
55	ER-336811	FILTER CE SFZ460A3L 0.46MHZ			
56	ER-336830	FILTER LC LP BL-34HD			
57	ER-315407	FILTER CE SFE10.7MMKA 10.7MHZ			
58	ES-328788	△ SW PUSH ESB-90144T 01-1 UC(C,A)			
59	ES-328787	△ SW PUSH ESB-90149R 01-1 J (J)			
60	ES-336909	△ SW PUSH ESB-90259S 01-1 C (U,E,B,S,V)			
61	ES-336760	SW TACT EVQ-QJR02K			
62	ES-328777	SW TACT EVQ-PYR12K			
63	ES-300122	SW TACT EVQ-QBR08K			
64	ET-330588	TR FET 2SK19 O,Y (L)			
65	ET-336937	TR FET 2SK223 E,F			
66	ET-315410	TR FET 2SK61 Y			
67	ET-336867	TR FET 3SK73 Y			

#### 1. TUNER P.C BOARD BLOCK

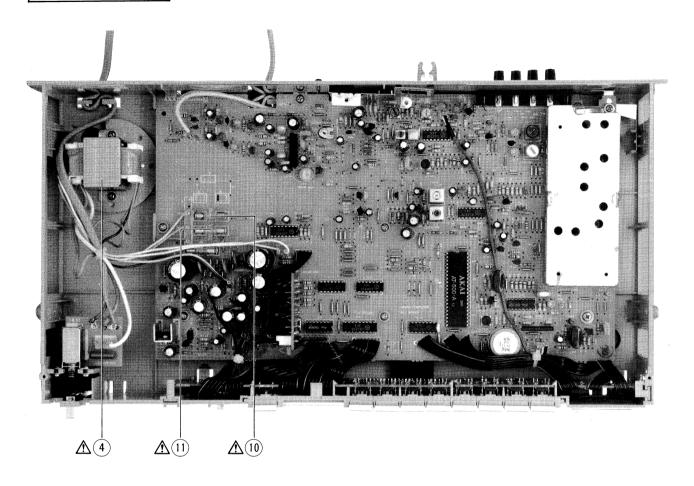
REF. NO.	PARTS NO.	DESCRIPTION	REF. NO.	PARTS NO.	DESCRIPTION
1-1	DA 4202340214	PC TUNER BLK AT-S210(U)	1-D33	ED-301911	D SILICON H DS448
		, ,	1-D33	ED-336944	D ZENER H 05Z16 X,Y
1-2		PC TUNER BLK AT-S210(C) (C,A) PC TUNER BLK AT-S210(E)	1-D34 1-D35to40	ED-330944 ED-301911	D SILICON H DS448
1-3			1-D331040		D ZENER H 05Z5.1 Y,Z
1-4		PC TUNER BLK AT-S210(S)		ED-336945	the control of the co
1-5		PC TUNER BLK AT-S210(V)	1-D42	ED-301911	D SILICON H DS448
1-6		PC TUNER BLK AT-S210-P(U)	1-D43,44	ED-200469	D SILICON H DS448 FA5 F10 (J)
1-7	BA-A3033A021G	PC TUNER BLK AT-S210-P(C)	1-D45,46	ED-301911	D SILICON H DS448
1-8	BA-A3033A021H	PC TUNER BLK AT-S210-P(E)	1-D47to49	ED-200469	D SILICON H DS448 FA5 F10 (L)
1-9	BA-A3033A021J	PC TUNER BLK AT-S210-P(S)	1-SW1	ES-328777	SW TACT EVQ-PYR12K
1-10	BA-A3033A021K	PC TUNER BLK AT-S210-P(V)	1-X1	EI-327074	OSC X'TAL HC-18/U 9MHZ
1-11	BA-A3034A020A	PC TUNER BLK AT-S210L(E)	1-VR1	EV-315416	R S-FIX H D8 3P 103
1-12		PC TUNER BLK AT-S210L(B)	1-V R2	EV-483388	R S-FIX H SR19R 3P 0.15W 103
1-13		PC TUNER BLK AT-S210L-P(E)	1-VR3	EV-315414	R S-FIX H D8 3P 203 (J)
1-14		PC TUNER BLK AT-S210L-P(B)	1-VC1to4	EC-336865	C S-FIX H CTZ51C 3.0-10
1-15		PC TUNER BLK AT-S210-J	1-VC5	EC-336808	C S-FIX H TZ03P450E 6.8-45
1-15	DA-A3034A020C	TO TONER BER MI B2103			(EXCEPT L)
	TIMED DC	BOARD BLOCK	1-VC5	EC-330692	C S-FIX H TZ03R200E 4.2-2.0 (L)
			1-VC6	EC-330692	C S-FIX H TZ03R200E 4.2-20 (L)
1-IC1	EI-322248	IC LA1231N	1-VC7	EC-330692	C S-FIX H TZ03R200E 4.2-20
1-IC2	EI-336793	IC LA3375	1-L1	EO-336872	COIL VARI 2 TFEI-ANT-U
1-IC3	EI-293185	IC LA1240	1-L1	EO-330872	
1-IC4	EI-315491	IC LB1405S		EO 226020	(EXCEPT J)
1-IC5	EI-315381	IC TD6102P	1-L1	EO-336939	COIL VARI 2 TFEI-ANT-J (J)
1-IC6	EI-336717	IC TC9125BP	1-L2	EO-336873	COIL VARI 2 TFEI-RF-1
1-IC7	EI-336866	IC AT500	1-L3	EO-336938	COIL VARI 2 TFEI-RF-2
1-IC8	EI-336794	IC LB1240	1-L4	EO-332120	COIL FIX 2 103AK-005A 2.20μH
1-IC9	EI-315379	IC TC5066BP	1-L5	EO-336871	COIL VARI 2 TFEI-OSC-U
1-IC10	EI-336962	IC LB1287			(EXCEPT J)
1-IC11,		IC LC4011	1-L5	EO-336940	COIL VARI 2 TFEI-OSC-J (J)
1-TR1	ET-336867	TR FET 3SK73 Y	1-T1	EO-337640	COIL IFT 199AC-15533X 10.7MHZ
1-TR2	ET-336869	TR 2SC2999 C,D	1-T2	EO-336878	COIL DET 2 78-1049
	ET-618873	TR 2SC930 E,F	1-T3	EO-336879	COIL DET 2 78-1050
1-TR3			1-T4	EO-202216	COIL IFT 7MC-6733C 460KHZ
1-TR4	ET-315410	TR FET 2SK61 Y	1-T5	EO-202210 EO-336877	COIL IFT PEGK0008B-03 455KHZ
1-TR5	ET-336935	TR 2SC3000 E,F	ł		
1-TR6	ET-322775	TR 2SC536K-NP E,F,G	1-T6	EO-336874	COIL VARI 2 25A-1253
1-TR7	ET-200558	TR 2SA1115 E,F	1-T7	EO-336829	COIL OSC 2 7NR-7818F 125μH
1-TR8	ET-200506	TR 2SC2603 F	1-T8	EO-336876	COIL VARI 2 25A-1254 (L)
1-TR9	ET-322775	TR 2SC536K-NP E,F,G	1-T9	EO-336828	COIL OSC 2 7NR-7819F 580µH (L)
1-TR10	ET-322778	TR 2SA608K-NP E,F,G	1-T10	EO-336833	COIL IFT 7MC-7736Z 460KHZ
1-TR11	,12 ET-200506	TR 2SC2603 F	1-FL1	ER-336804	FILTER CE SFE10.7MA8
1-TR13		△ TR 2SD571 L,M			10.7MHZ (EXCEPT V)
1-TR15		△ TR 2SC536K-NP E,F,G	1-FL1	ER-338338	FILTER CE MS3GKY-A
1-TR17	*	△ TR 2SD313 E,F			10.7MHZ (V)
1-TR18		TR 2SA608K-NP E,F,G	1-FL2	ER-315407	FILTER CE SFE10.7MMKA
1-TR19		△ TR 2SC536K-NP E,F,G			10.7MHZ
		TR 2SD1012-V F,G	1-FL3	ER-336810	FILTER CE SFZ459A3L
1-TR21		· · · · · · · · · · · · · · · · · · ·	1123	ER SCOOLS	0.459MHZ (EXCEPT C)
1-TR23		TR 2SC536K-NP E,F,G	1-FL3	ER-336811	FILTER CE SFZ460A3L
1-TR24		TR 2SA608K-NP E,F,G	1123	ER SSOOT	0.46MHZ (C)
1-TR25		TR 2SC536K-NP E,F,G	1-FL4	ED 226920	FILTER LC LP BL-34HD (V)
1-TR26		TR FET 2SK223 E,F	1	ER-336830	COMP R 01-0087
1-TR27		TR 2SC536K-NP E,F,G	1-SR1	ER-336880	
	to31 ET-322775	TR 2SC536K-NP E,F,G (L)	1-R21,22	ER-324480	A R CB H SNP FS RDS 1/4W 470J
1-TR32	ET-338410	TR 2SC2878 A,B (L)	1-R32,33	ER-324337	A R CB H SNP FS RDS 1/4W 560J
1-TR33	ET-330588	TR FET 2SK19 O,Y (L)	1-R50,51	ER-324337	A R CB H SNP FS RDS 1/4W 560J
1-TR34	ET-322775	TR 2SC536K-NP E,F,G (J)	1-R58,59	ER-324337	△ R CB H SNP FS RDS 1/4W 560J
1-TR35	ET-322778	TR 2SA608K-NP E,F,G (J)	1-R63,64	ER-324337	⚠ R CB H SNP FS RDS 1/4W 560J
1-TR36		TR 2SC536K-NP E,F,G (J)	1-R67,68	ER-324337	⚠ R CB H SNP FS RDS 1/4W 560J
1-TR37		TR 2SA608K-NP E,F,G (J)	1-R98,99	ER-324337	⚠ R CB H SNP FS RDS 1/4W 560J
1-TR39		TR 2SC536K-NP E,F,G (J)	1-R109	ER-324184	⚠ R CB H SNP FS RDS 1/4W 121J
1-D1to		D VARACTOR SVC211SP	1-R121	ER-324934	⚠ R CB H SNP FS RDS 1/4W 220J
1-D5to		D SILICON H DS448	*-		(L)
	ED-301911 ED-324197	D VARACTOR KV1226X DOUBLE	1-R123,124	ER-324337	△ R CB H SNP FS RDS 1/4W 560J
1-D15		D SILICON H DS448	1-R131	ER-322787	△ R CB H SNP FS RDS 1/4W 100J
1-D17,1			1-R136	ER-324934	△ R CB H SNP FS RDS 1/4W 220J
1-D19to		D SILICON H DS448 FA5 F10 (L)	1-R137	ER-323074	A R CB H SNP FS RDS 1/4W 102J
1-D22to	25 ED-336805	△ D SILICON DS135D-KB1		ER-325269	△ R CB H SNP FS RDS 1/4W 222J
		200/1.0A	1-R141		· · · · · · · · · · · · · · · · · · ·
1-D26	ED-303155	D ZENER H 05Z5.6 Z	1-R144	ER-322421	A R CB H SNP FS RDS 1/4W 820J
1-D27	ED-336805	△ D SILICON DS135D-KB1	1-R149	ER-328067	△ R CB H SNP FS RDS 1/4W 331J
		200/1.0A	1-R170	ER-324934	⚠ R CB H SNP FS RDS 1/4W 220J
1-D28	ED-315372	D ZENER H WZ-300	1-R207	ER-333359	△ R CB H SNP FS RDS 1/4W 111J
1-D29	ED-336805	△ D SILICON DS135D-KB1			(1)
		200/1.0A	1-C15	EC-314995	C STY V SNP CQFS 331J 50DC
1-D30	ED-316519	D ZENER H WZ-172	1-C30	EC-314990	C STY V SNP CQFS 101J 50DC
1-D31	ED-303155	D ZENER H 05Z5.6 Z	1-C45	EC-314995	C STY V SNP CQFS 331J 50DC
1-D32	ED-336943	D ZENER H 05Z15 Y	1-C54	EC-331183	C STY V SNP CQFS 102J 50DC

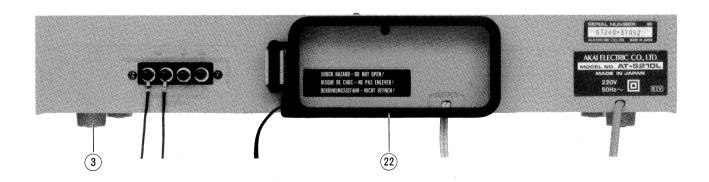
#### 2. POWER SW P.C BOARD BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
1-C58,59	EC-337331	C PP V APS 153J 100DC
1-C64,65	EC-334397	C STY V SNP CQFS 272J 50DC
1-C66,67	EC-310439	C STY V SNP CQFS 511J 50DC
1-C68,69	EC-334397	C STY V SNP CQFS 272J 50DC
1-C97	EC-314952	C STY V F05 CO09S 4300G
10,,	26 31 1732	50DC (EXCEPT L)
1-C97	EC-324368	C STY V F05 CQ09S 5100G 50DC (L)
1-C101	EC-336950	C STY V F05 CQ09S 2200G 50DC (L)
1-C141	EC-336882	C SUPER 104 5.0DC
1-C158	EC-334075	C STY V F05 CQ09S 122J 50DC
1-TM1	EJ-309941	TERMINAL W/SCREW UB-1059 P
1 11	13 30 / / / 1	4P (EXCEPT V)
1-TM 1	EJ-332213	TERMINAL W/SCREW UB-0090 P
1 TM2	EL 22/20/	2P (V)
1-TM2	EJ-336806	PLUG CO-AX P2132-C (V)
		P.C BOARD BLOCK
1-TR1	ET-322778	TR 2SA608K-NP E,F,G
1-TR2	ET-322775	TR 2SC536K-NP E,F,G
1-TR3	ET-322775	TR 2SC536K-NP E,F,G (L)
1-D1	ED-322773	D LED SLP-255D-01 GRN
1-D2to5	ED-322772	D LED SLP-155D-01 RED
1-D6	ED-322773	D LED SLP-255D-01 GRN
1-D7to9	ED-336786	D LED SLP-271D GRN
1-D10to13	ED-336786	D LED SLP-271D GRN
1-D16	ED-200469	D SILICON H DS448 FA5 F10
1-D17	ED-200469	D SILICON H DS448 FA5 F10 (EXCEPT L)
1-D18	ED-336786	D LED SLP-271D GRN (L)
1-IND1	EM-336863	IND FL 8-BT-01ZK CHARACTER
1-SW1to4	ES-336760	SW TACT EVO-OJR02K
1-SW5	ES-300122	SW TACT EVQ-QBR08K
1-SW6,7	ES-336760	SW TACT EVQ-QJR02K
1-SW8	ES-300122	SW TACT EVQ-QBR08K
1-SW9	ES-336760	SW TACT EVQ-QJR02K
1-SW10	ES-336760	SW TACT EVQ-QJR02K (J)
1-SW11,12	ES-336760	SW TACT EVQ-QJR02K
1-SW13	ES-336760	SW TACT EVQ-QJR02K (L)
	DRIVER P.C	BOARD BLOCK
1-TR1to5	ET-322778	TR 2SA608K-NP E,F,G
1-TR6to10	ET-322775	TR 2SC536K-NP E,F,G
	LPF P.C BOA	RD BLOCK (V ONLY)
1-FL1	ER-341654	FILTER LC LP 42W-1001 (V)
1-C3,4	EC-334400	C STY V SNP CQFS 392J 50DC (V)
,-		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

REF. NO.	PARTS NO.		DESCRIPTION
2-SW1	ES-336909	Δ	SW PUSH ESB-90259S 01-1 C
			(U,E,B,S,V)
2-SW1	ES-328788	$\triangle$	SW PUSH ESB-90144T 01-1 UC
			(C,A)
2-SW1	ES-328787	$\triangle$	SW PUSH ESB-90149R 01-1 J(J)
2-C1	EC-320548		C CE V F 103Z 250AC (U,J)
2-C1	EC-314688		C CE V FZ 103P 125AC (C,A)
2-C1	EC-338496		C CE V FZ 472P 400AC
			(E,B,S,V)
			(_,_,_,,,

## ASSEMBLY BLOCK

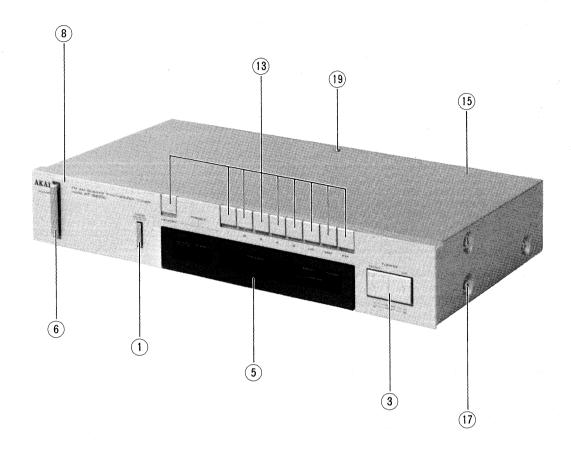




### 3. ASSEMBLY BLOCK

REF. NO.	PARTS NO.	DESCRIPTION			
	FILTER P.C BOARD BLOCK (V ONLY)				
3-1 x	EO-338409	COIL LF FKOB160MH02 250µH			
		(FIL1) (V)			
3-2 x	ES-336909	SW PUSH ESB-90259S 01-1 C (SW1) (V)			
	ASSEMBLY I				
3-3	SA-332822	FOOT			
3-4	BT-336862	△ TRANS POWER AT-S210T-70 (U)			
3-5 x	BT-336859	△ TRANS POWER AT-S210T-30 (C)			
3-6x	BT-336884	△ TRANS POWER AT-S210T-20 (A)			
3-7 x	BT-336860	△ TRANS POWER AT-S210T-40 (E,V)			
3-8x	BT-336861	⚠ TRANS POWER AT-S210T-50 (B,S)			
3-9x	BT-336883	⚠ TRANS POWER AT-S210T-10 (J)			
3-10	EF-309389	⚠ FUSE TSC A 250V 0.40A (F1) (U)			
3-11	EF-308933	⚠ FUSE TSC A 250V 0.20A (F2,3) (U)			
3-12x	EF-308848	△ FUSE TSC 125V 0.40A (F1,2) (C,A)			
3-1 3x	EF-315334	△ FUSE TSC 125V 0.25A (F3) (C,A)			
3-14x	EF-300599	△ FUSE FST3100 T 250V 0.40A			
		(F1,2) (E,B,S,V)			
3-15x	EF-336834	<b>⚠</b> FUSE FST3100 TIME 250V 0.16A			
		(F3) (E,B,S,V)			
3-16x	EF-336834	<b>⚠</b> FUSE FST3100 TIME 250V 0.16A			
		(F4) (B)			
3-17	EW-306428	△ AC CORD 2 CORES KP-205A, VFF J			
		(U)			
3-18x	EW-305691	△ AC CORD 2 CORES KP-8, SPT-1 UC			
		(C,A)			
3-19x	EW-336923	$\triangle$ AC CORD 2 CORES KP-419C,			
		LTCE-2F E (E,V)			
3-20x	EW-336924	△ AC CORD 2 CORES KP-560,			
		LTSA-2F S (B,S)			
3-21x	EW-306427	△ AC CORD 2 CORES KP-211, VFF J			
		(J)			
3-22	EE-330614	ANT LOOP LA-1300Y			
3-23x	ZW-305013	RV POP32			

# FINAL ASSEMBLY BLOCK



#### 4. FINAL ASSEMBLY BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
4-1	SK-332829A	KNOB MODE
4-2 x	SK-332829B	KNOB MODE-P
4-3	SK-332828A	KNOB TUNING
4-4x	SK-332828B	KNOB TUNING-P
4-5	TA-B604407	WINDOW FRONT PART
4-6	SK-332831A	KNOB POWER
4-7 x	SK-332831B	KNOB POWER-P
4-8	SP-332825A	PANEL FRONT AT-S210
4-9x	SP-332825B	PANEL FRONT AT-S210-P
4-10x	SP-332825C	PANEL FRONT AT-S210L
4-11x	SP-332825D	PANEL FRONT AT-S210L-P
4-12x	SP-332825E	PANEL FRONT AT-S210 (CAL-TONE)
4-13	SK-332830A	KNOB OPERATION
4-14x	SK-332830B	KNOB OPERATION-P
4-15	SP-332826A	COVER UPPER
4-16x	SP-332826B	COVER UPPER-P
4-17	ZS-336541	T2BID40×16STL NI3
4-18x	ZS-336542	T2BID40×16STL BNI
4-19	ZS-336544	T2BID40×16STL NI3 PROJECTION
4-20x	ZS-336545	T2BID40×16STL BNI PROJECTION
4-21x	ZS-336697	T2BR30×06STL NI3 PROJECTION
4-22x	ZS-319460	T2BR30×06STL BZN PROJECTION
,	25 517.00	I D D I CO CO L D D - I C C C C C C C C C C C C C C C C C C

## II. MODEL AM-U210/J

#### **RECOMMENDED SPARE PARTS**

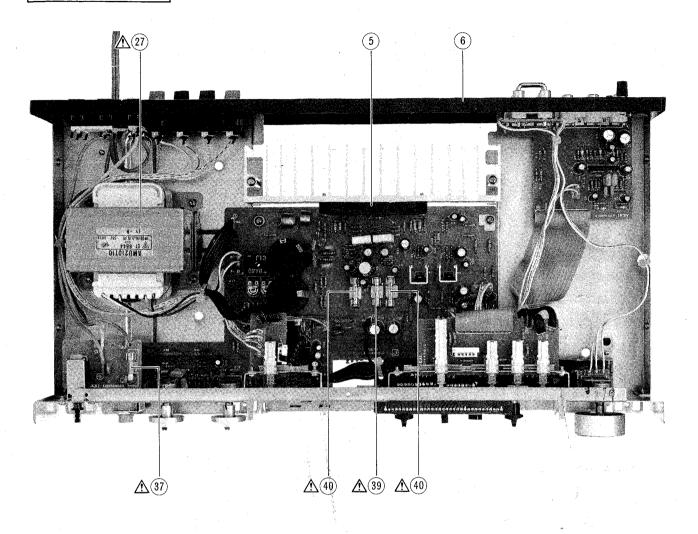
Because, if the parts listed below are on hand, almost any repair can be accomplished, we suggest that you stock these Recommended Spare Parts Items.

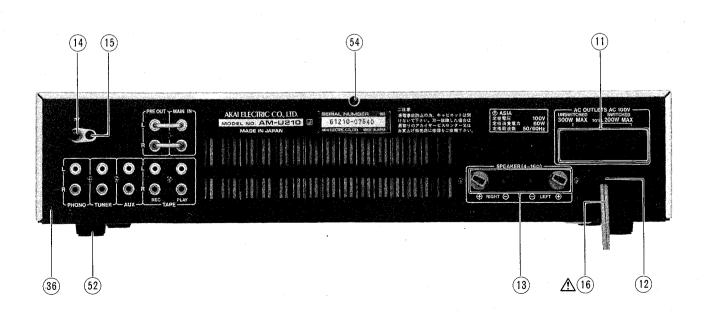
NO.	PARTS NO.	DESCRIPTION
1	BT-336910	△ TRANS POWER AM-U210T-10 (J)
2	BT-336887	△ TRANS POWER AM-U210T-20 (A)
3	BT-336888	△ TRANS POWER AM-U210T-30 (C)
4	BT-336889	△ TRANS POWER AM-U210T-40 (E)
5	BT-336890	△ TRANS POWER AM-U210T-40-2 (V)
6	BT-336891	△ TRANS POWER AM-U210T-50 (B,S)
7	BT-336893	△ TRANS POWER AM-U210-T-70 (U)
8	ED-309341	D GERMA H 1K34A
9	ED-322773	D LED SLP-255D-01 GRN
10	ED-336786	D LED SLP-271D GRN
11	ED-200213	D SILICON DBA40C-K15 200/2.6A
12	ED-300924	D SILICON GP08D 200/0.8A
13	ED-200469	D SILICON H DS448 FA5 F10
14	ED-330218	D ZENER H HZ15L 2
15	ED-330219	D ZENER H HZ20L 2
16	ED-323354	D ZENER H 05Z6.2 X
17	EF-325683	△ FUSE GGS A 125V 5A (F2) (C,A)
18	EF-623103	△ FUSE SEMKO T 250V 1A
		(F1) (E,B,S,V)
19	EF-601301	△ FUSE SEMKO T 250V 2A
		(F3,4) (E,B,S,V)
20	EF-249851	△ FUSE SEMKO T 250V 5A
		(F2) $(E,B,S,V)$
21	EF-306949	△ FUSE TSC A 250V 1.25A (F2,3) (U)
22	EF-306951	△ FUSE TSC A 250V 2.5A (F1) (J)
23	EF-306950	△ FUSE TSC A 250V 2A (F3,4) (J)
24	EF-326613	<b>△</b> FUSE TSC A 250V 5A (F2) (J)
25	EF-306954	△ FUSE TSC 125V 2A (F3,4) (C,A)
26	EF-323080	△ FUSE TSC 125V 3.15A (F1) (C,A)
27	EI-315799	IC HA12019
28	EI-336930	IC LA6458SS
29	EI-336917	IC STK463-ST
30	EI-322599	IC TA75458S
31	EI-200938	IC TA75558S (J)
32	EM-336916	IND FL BG97Z GRAPH
33	ES-328788	△ SW PUSH ESB-90144T 01-1 UC (C,A)
34	ES-328787	∆ SW PUSH ESB-90149R 01-1 J (J)
35	ES-336909	△ SW PUSH ESB-90259S 01-1 C
		(U,E,B,S,V)
36	ES-336897	SW PUSH ESB-62512 2-02-02S
37	ES-336908	SW PUSH ESB-62601 2-04-02S
38	ES-336906	SW PUSH ESB-62602 4THROW
39	ET-322778	TR 2SA608K-NP E,F,G
40	ET-322598	TR 2SB632K E,F
41	ET-307195	TR 2SC2240 GR,BL (J)
42	ET-310148	TR 2SD612K E,F
43	EV-315412	R S-FIX H D8 3P 502
44 45	EV-336913	VR ROTARY 16P10×1K B503 (J)
45 46	EV-336911 EV-336898	VR ROTARY 16P10x1J SPECIAL W105
46 47	EV-336898 EV-336899	VR ROTARY 16P20×2L C104 VR ROTARY 16P20×2M C104
48	EV-336899 EV-336912	VR ROTARY 16P20x2M C104 VR ROTARY 16P20x2N B254
70	LV-330712	VICIANT TOFZUXZN DZ54

#### 1. MAIN P.C BOARD BLOCK

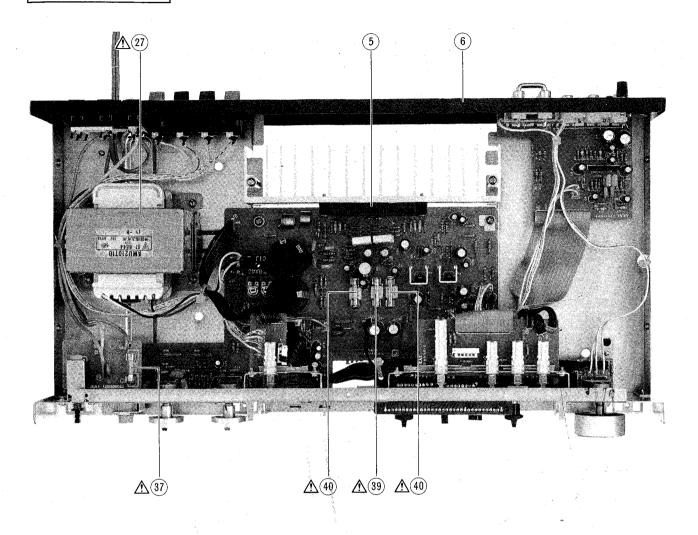
REF. NO.	PARTS NO.	DESCRIPTION	REF.	PARTS NO. DESCRIPTION
1-2 BA-	A2013A080B	PC MAIN BLK AM-U210(U)(U,C,A) PC MAIN BLK AM-U210(E)(E,B,S)	1-IC1	MIC P.C BOARD BLOCK EI-200938 IC TA75558S (J)
	A2013A080C A2013A080D	PC MAIN BLK AM-U210(V)(V) PC MAIN BLK AM-U210-P(U)	1-VR1	EV-336913 VR ROTARY 16P10×1K B503 (J)
1-5 BA-	A2013A080E	(U,C,A) PC MAIN BLK AM-U210-P(E)		
	A2013A080F A2014A020A	(E,B,S) PC MAIN BLK AM-U210-P(V)(V) PC MAIN BLK AM-U210-J(J)		
	MAIN P.C BO	ARD BLOCK		
1-IC1	EI-322599	IC TA75458S TR 2SA608K-NP E,F,G		
1-TR1 1-TR2	ET-322778 ET-322598	△ TR 2SB632K E,F		
1-TR3	ET-310148	△ TR 2SD612K E,F		
1-TR4 1-D1,2	ET-307195 ED-200469	TR 2SC2240 GR,BL (J) D SILICON H DS448 FA5 F10		
1-D1,2 1-D3,4	ED-330219	D ZENER H HZ20L 2		
1-D5	ED-200213	⚠ D SILICON DBA40C-K15		
1-D6	ED-300924	200/2.6A △ D SILICON GP08D 200/0.8A		
1-D7	ED-200469	D SILICON H DS448 FA5 F10		
1-D8	ED-309341	D GERMA H 1 K 34A		
1-D9 1-D10	ED-323354 ED-330218	D ZENER H 05Z6.2 X D ZENER H HZ15L 2		
1-J 1	EJ-336900	PHONE J 3P HLJ0316-523 6.3		
1-J1	EJ-336901	PHONE J 3P HLJ0316-520 6.3 (P)		
1-J3 1-SW1	EJ-336929 ES-336897	PHONE J 3P HLJ0306-010 6.3 (J) SW PUSH ESB-62512 2-02-02S		
1-L1	EO-336902	COIL DET2 106AK-026 1.00μH		
1-L2	EO-336934	COIL FIX1 LAL03KH 2.2µH M (V)		
1-VR1 1-VR2	EV-336898 EV-336899	VR ROTARY 16P20×2L C104 VR ROTARY 16P20×2M C104		
1-VR3	EV-315412	R S-FIX H D8 3P 502		
1-R5	ER-322787	△ R CB H SNP FS RDS 1/4W 100J R CT P F09 PLATE 3W R33K		
1-R8 1-R10	ER-336920 ER-308875	↑ R CB H SNP FS RDS 1/2W 100J		
1-R23	ER-316802	⚠ R CB H SNP FS RDS 1/4W 471J		
1-R24 1-R30	ER-321153 ER-322787	△ R OMF H SNP FS 1W 102J △ R CB H SNP FS RDS 1/4W 100J		
1-R33	ER-322787	△ R CB H SNP FS RDS 1/4W 100J		
1-R36	ER-308028	△ R OMF H SNP FS 1W 181J		
1-R40 1-R43,44	ER-336919 ER-316802	△ R OMF H SNP FS 1W 121J △ R CB H SNP FS RDS 1/4W 471J		
1 11 10,11	211 01 0002	(J)		
1-C15	EC-313533	C EC V F05 NP 04D 4R7M 16.0DC		
1-C18 1-C19	EC-313532 EC-333972	C EC V F05 NP 04D 1R0M 50.0DC C EC V F05 NP SM 3R 3M 50DC		
1-C28,29	EC-320307	C EC V SNP VN 682 40DC		
1-C30 1-C33	EC-326583 EC-320548	C MMY V CUT CF921 473K 400DC C CE V F 103Z 250AC		
1-033	EC-320346	C CE V F 1032 230AC		
	-	P.C BOARD BLOCK		
1-IC1 1-J5	EI-336930 EJ-336904	IC LA6458SS PIN J C-920 P 6P		
1-J6	EJ-336905	PIN J C-910 P 4P		
1-L1	EO-338420	COIL FIX 2 FL12R202E 2MH (V)		
1-L2to5 1-R9,10	EO-336934 ER-316802	COIL FIX1 LAL03KH 2.2µH M (V) R CB H SNP FS RDS 1/4W 471J		
110,10		·		
1 CW/1	FUNCTION P ES-336906	P.C BOARD BLOCK SW PUSH ESB-62602 4THROW		
1-SW1	ES-330900	(EXCEPT J)		
1-SW1	ES-336907	SW PUSH ESB-62603 4THROW (J)		
1-SW1	SPEAKER P.0 ES-336908	C <b>BOARD BLOCK</b> SW PUSH ESB-62601 2-04-02S		
1-VR1	BALANCE P. EV-336911	C BOARD BLOCK VR ROTARY 16P10×1J SPECIAL W105		
1-VR1	MAIN VR P.C EV-336912	C BOARD BLOCK VR ROTARY 16P20×2N B254		

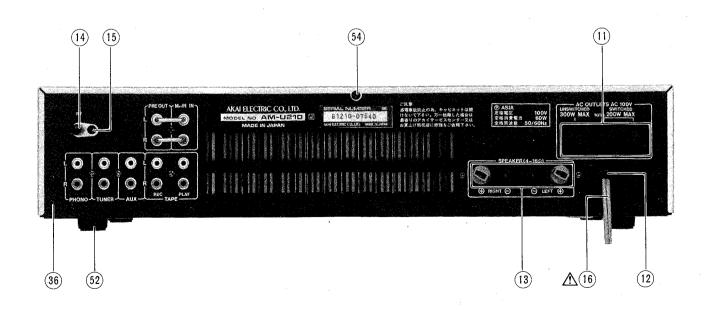
## ASSEMBLY BLOCK





# ASSEMBLY BLOCK





### 2. POWER P.C BOARD BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
2-SW1	ES-336909 A	SW PUSH ESB-90259S 01-1 C
		(U,E,B,S,V)
2-SW1	ES-328788	SW PUSH ESB-90144T 01-1 UC
		(C,A)
2-SW1	ES-328787 △	SW PUSH ESB-90149R 01-1 J(J)
2-C1	EC-320548	C CE V F 103Z 250AC (U,J)
2-C1	EC-314688 A	C CE V FZ 103P 125AC (C,A)
2-C1	EC-330307 △	C MMY V ECQUF 472M 250AC
		(E,B,S,V)
2-FL1	EO-338409 C	OIL LF FKOB160MH02 250µH(V)

### 3. METER P.C BOARD BLOCK

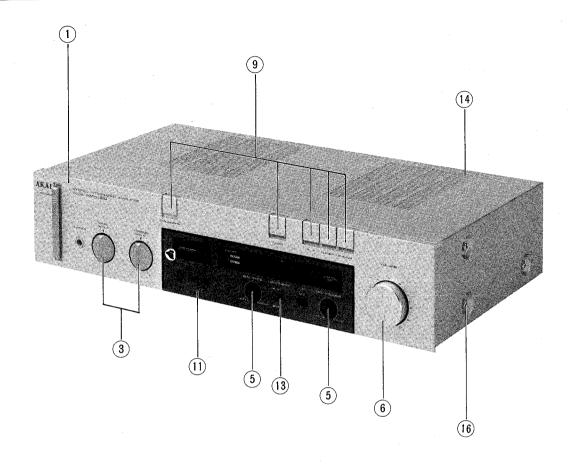
REF. NO.	PARTS NO.	DESCRIPTION
3-IC1 3-IND1	EI-315799 EM-336916	IC HA12019 IND FL BG97Z GRAPH
	3.5°	

## 4. ASSEMBLY BLOCK

REF.	PARTS NO.	DESCRIPTION
140.		
		BOARD BLOCK
4-1 x	ED-336786	D LED SLP-271D GRN (D1to4)
	TED (A) D o	
4.0		BOARD BLOCK
4-2 x	ED-322773	D LED SLP-255D-01 GRN (D)
	ESCUTCHE	ON DI OCV
4-3x	SE-332531A	
4-4x	SE-332531B	The second secon
		ESCOTOMEON KNOWSELECTOR-I
	HEAT SINK	BLOCK
4-5	EI-336917	△ IC STK463-ST (IC901)
	REAR PANI	
4-6	SP-342316B	
4-7x	SP-342316C	PANEL REAR AM-U210 (C,A)
4-8x 4-9x	SP-332521D	
	SP-332521E SP-342316F	
4-11	EJ-240535	PANEL REAR AM-U210(J) KOWA  △ SOCKET OUTLET S-I6526 U 3x2P
	23 2 103 33	
4-12x	EJ-332248	(U,A,J)  A SOCKET OUTLET S-16527#01
		3×2P (C)
4-13	EJ-336896	TERMINAL W/SCREW ANB-017-ABA
		S 4P
4-14	EJ-329610	TERMINAL W/SCREW UB-0067 L 1P
4-15	ZS-447761	T2BR30×06STL BNI
4-16	EW-306428	⚠ AC CORD 2 CORES KP-205A,
4 17v	EW 205 (01	VFF J (U)
4-17x	EW-305691	⚠ AC CORD 2 CORES KP-8, SPT-1 UC
4-18x	EW-336923	$\triangle$ AC CORD 2 CORES KP-419C,
1 101	LW-330923	
4-19x	EW-336926	LTCE-2F E (E,V)  A AC CORD GTBS-2F 24/0.20×2 B (B)
4-20x	EW-336924	△ AC CORD 2 CORES KP-560,
		LTSA-2FS (S)
4-21x	EW-306427	△ AC CORD 2 CORES KP-211, VFF J
		(J)
4-22	SZ-631945	STRAIN RELIEF SR-4N-4
	T) *	(U,C,A,E,S,V,J)
4-23x	EJ-692908	STRAIN RELIEF SR-5N-4 (B)
	TERMINAL I	P.C BOARD BLOCK (V)
4-24x	ZS-337191	TERMINAL W/SCREW ANB-015-ACA
. 2	25-337191	P 4P (TM901) (V)
4-25x	ER-337108	FILTER LC LP CL-S-1 (FL1) (V)
		TIDIDA DE DI CE-5-I (FLI) (V)
	PIN JACK P.(	C BOARD BLOCK (J)
4-26x	EJ-336915	PIN J C-810 P 4P (J7) (J)
	ASSEMBLY E	
4-27	BT-336893	△ TRANS POWER AM-U210T-70 (U)
4-28x 4-29x	BT-336888 BT-336887	△ TRANS POWER AM-U210T-30 (C)
4-29x 4-30x	BT-336889	A TRANS POWER AM-U210T-20 (A)
4-31x	BT-336891	△ TRANS POWER AM-U210T-40 (E) △ TRANS POWER AM-U210T-50 (B,S)
4-32x	BT-336890	△ TRANS POWER AM-U210T-40-2 (V)
4-33x	BT-336910	△ TRANS POWER AM-U210T-10 (J)
4-34x	ZS-332541	SCREW HEAT SINK
4-35x	ZW-698308	RV NYL30x055 BL
4-36	ZS-319460	T2BR 30×06STL BZN PROJECTION
4-37	EF-306951	⚠ FUSE TSC A 250V 2.5A (F1) (U)
4-38x	EF-306949	△ FUSE TSC A 250V 1.25A (F2,3) (U)
4-39 4-40	EF-325683 EF-306954	A FUSE GGS A 125V 5A (F4) (U)
4-40 4-41x	EF-323080	△ FUSE TSC 125V 2A (F5,6) (U)
4-42x	EF-325683	△ FUSE TSC 125V 3.15A (F1) (C,A) △ FUSE GGS A 125V 5A (F2) (C,A)
	EF-306954	▲ FUSE GGS A 125V SA (F2) (C,A)  ▲ FUSE TSC 125V 2A (F3,4) (C,A)
4-44x	EF-623103	△ FUSE SEMKO T 250V 1A
		(F1) (E,B,S,V)
4-45x	EF-249851	△ FUSE SEMKO T 250V 5A
		(F2) (E,B,S,V)
4-46x	EF-601301	△ FUSE SEMKO T 250V 2A
		(F3) (E,B,S,V)

REF. NO.	PARTS NO.	DESCRIPTION
4-47x	EF-601301	△ FUSE SEMKO T 250V 2A
		(F4) (E,B,S,V)
4-48x	EF-306951	⚠ FUSE TSC A 250V 2.5A (F1) (J)
4-49x	EF-326613	⚠ FUSE TSC A 250V 5A (F2) (J)
4-50x	EF-306950	△ FUSE TSC A 250V 2A (F3) (J)
4-51x	EF-306950	△ FUSE TSC A 250V 2A (F3,4) (J)
4-52	SA-332850	ROUND FOOT
4-53x	ZS-565942	T2PAN40×08STL CMT
4-54	ZS-319460	T2BR30×06STL BZN PROJECTION
4-55x	SP-332524	
4-33X	SP-332524	COVER BOTTOM
4-56x	ZW-305013	RV POP32 (A)

## FINAL ASSEMBLY BLOCK



### 5. FINAL ASSEMBLY BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
	FRONT PANEL	BLOCK
5-1	BD-A2013A020A	PANEL FRONT BLK AM-U210
5-2 x	BD-A2013A020B	PANEL FRONT BLK AM-U210-P
	FINAL ASSEMI	BLY BLOCK
5-3	SK-332533A	KNOB ROTARY (B)
5-4x	SK-332533B	KNOB ROTARY (B)-P
5-5	SK-332534	KNOB ROTARY (C)
5-6	SK-332532A	KNOB ROTARY (A)
5-7 x	SK-332532B	KNOB ROTARY (A)-P
5-8x	ZG332538	SP PUSH KNOB (A)
5-9	SK-332535A	KNOB PUSH (A)
5-10x	SK-332535B	KNOB PUSH (A)-P
5-11	SP-B604404	WINDOW METER (A) PART
5-12x	SP-B604403	WINDOW METER PART (J)
5-13	SK-332536	KNOB PUSH (B)
5-14	BC-332527A	COVER UPPER
5-15x	SP-332527B	COVER UPPER-P
5-16	ZS-322570	ST BID40×08STL NI3
5-17x	ZS-322580	ST BID40×08STL BNI

# INDEX

## 1. MODEL AT-S210/L/J

PARTS NO.	REF. NO.	PARTS NO.	REF. NO.	PARTS NO.	REF. NO.	PARTS NO.	REF. NO.
		EI-293185	1-IC3	ET-322775		TARIB NO.	KEI . NO.
BA-A3033A021A BA-A3033A021B		EI-293163 EI-315379	1-IC3 1-IC9	ET-322775	1-TR27,28 1-TR25		
BA-A3033A021C		EI-315379 EI-315381	1-IC5	ET-322775	1-TR23		
BA-A3033A021D		EI-315491	1-IC3 1-IC4	ET-322775	1-TR9		
BA-A3033A021E		EI-322248	1-IC1	ET-322775	1-TR15,16		
BA-A3033A021F		EI-327074	1-X1	ET-322775	1-TR19,20		
BA-A3033A021G		EI-330689	1-IC11,12	ET-322775	1-TR29to31		*
BA-A3033A021H		EI-336717	1-IC6	ET-322775	1-TR36		
BA-A3033A021J	1-9	EI-336793	1-IC2	ET-322775	1-TR6		
BA-A3033A021K	1-10	EI-336794	1-IC8	ET-322775	1-TR6to10		
D	1 11	EL 22/0//	1.707	EE 22255	4 mp.a		
BA-A3034A020A		EI-336866	1-IC7 1-IC10	ET-322775	1-TR2		
BA-A3034A020B BA-A3034A020C		EI-336962 EJ-309941	1-IC 10 1-TM1	ET-322778	1-TR35 1-TR10	· ·	
BA-A3034A020C BA-A3034A020D		EJ-332213	1-TM1	ET-322778 ET-322778	1-TR37		
BA-A3034A020E		EJ-336806	1-TM2	ET-322778	1-1R37 1-TR24		
BT-336859	3-5x	EM-336863	1-IND1	ET-322778	1-TR18		
BT-336860	3-7x	EO-202216	1-T4	ET-322778	1-TR1		
BT-336861	3-8x	EO-332120	1-L4	ET-322778	1-TR1to5		
BT-336862	3-4	EO-336828	1-T9	ET-328437	1-TR21,22		
BT-336883	3-9x	EO-336829	1-T7	ET-330588	1-TR33		
BT-336884	3-6x	EO-336833	1-T10	ET-336867	1-TR1		
EC-310439	1-C66,67	EO-336871	1-L5	ET-336869	1-TR2		
EC-314688	2-C1	EO-336872	1-L1	ET-336935	1-TR5		
EC-314952 EC-314990	1-C97 1-C30	EO-336873	1-L2 1-T6	ET-336937	1-TR26		
EC-314990 EC-314995	1-C30 1-C15	EO-336874 EO-336876	1-16 1-T8	ET-338410 ET-452531	1-TR32 1-TR17		
EC-314995 EC-314995	1-C15 1-C45	EO-336876 EO-336877	1-18 1-T5	ET-618873	1-1R1/ 1-TR3		
EC-314993 EC-320548	2-C1	EO-336878	1-13 1-T2	ET-655356	1-1 K 3 1-TR13		
EC-320348 EC-324368	1-C97	EO-336879	1-12 1-T3	EV-315414	1-1K13 1-VR3		
EC-324308 EC-330692	1-VC6	EO-336979 EO-336938	1-L3	EV-315414 EV-315416	1-VR3 1-VR1		
EC-330692	1-VC7	EO-336939	1-L1	EV-483388	1-VR2		
EC-330692	1-VC5	EO-336940	1-L5	EW-305691	3-18x		ł
EC-331183	1-C54	EO-337640	1-T1	EW-306427	3-21x		
EC-334075	1-C158	EO-338409	3-1 x	EW-306428	3-17		
EC-334397	1-C68,69	ER-315407	1-FL2	EW-336923	3-19x		
EC-334397	1-C64,65	ER-322421	1-R144	EW-336924	3-20x		
EC-334400	1-C3,4	ER-322787	1-R131	SA-332822	3-3	İ	
EC-336808	1-VC5	ER-323074	1-R137	SK-332828A	4-3		
EC-336865	1-VC1to4 1-C141	ER-324184	1-R109	SK-332828B	4-4x		
EC-336882	1-0141	ER-324337	1-R58,59	SK-332829A	4-1		
EC-336950	1-C101	ER-324337	1-R50,51	SK-332829B	4-2 x		
EC-337331	1-C58,59	ER-324337	1-R63,64	SK-332830A	4-13		
EC-338496	2-C1	ER-324337	1-R123,124	SK-332830B	4-14x		
ED-200469	1-D16	ER-324337	1-R32,33	SK-332831A	4-6		
ED-200469	1-D17	ER-324337	1-R67,68	SK-332831B	4-7x		
ED-200469	1-D19to21	ER-324337	1-R98,99	SP-332825A	4-8		
ED-200469	1-D43,44	ER-324480	1-R21,22	SP-332825B	4-9x	· ·	
ED-200469	1-D47to49	ER-324934	1-R121	SP-332825C	4-10x		*
ED-301911 ED-301911	1-D45,46 1-D33	ER-324934	1-R136	SP-332825D	4-11x		
ED-301911	1-033	ER-324934	1-R170	SP-332825E	4-12x		
ED-301911	1-D42	ER-325269	1-R141	SP-332826A	4-15		
ED-301911	1-D17,18	ER-328067	1-R149	SP-332826B	4-16x		*
ED-301911	1-D5to14	ER-333359	1-R207	TA-B604407	4-5		
ED-301911	1-D35to40	ER-336804	1-FL1	ZS-319460	4-22x		
ED-303155	1-D26	ER-336810	1-FL3	ZS-336541	4-17		
ED-303155 ED-315372	1-D31 1-D28	ER-336811	1-FL3	ZS-336542	4-18x		
ED-315372 ED-316519	1-D28 1-D30	ER-336830	1-FL4 1-SR1	ZS-336544	4-19 4-20x		
ED-316519 ED-322772	1-D30 1-D2to5	ER-336880 ER-338338	1-SK1 1-FL1	ZS-336545 ZS-336697	4-20x 4-21x		
ED-322772 ED-322773	1-D2103	ER-336536 ER-341654	1-FL1 1-FL1	ZW-305013	3-23x		
-					-		
ED-322773	1-D6	ES-300122	1-SW5				
ED-324197	1-D15	ES-300122	1-SW8				
ED-336786	1-D18	ES-328777	1-SW1				
ED-336786	1-D7to9	ES-328787	2-SW1				
ED-336786 ED-336805	1-D10to13 1-D29	ES-328788	2-SW1	1			
ED-336805 ED-336805	1-D29 1-D22to25	ES-336760	1-SW1to4				
ED-336805	1-D221025 1-D27	ES-336760 ES-336760	1-SW9 1-SW11,12				•
ED-336832	1-D27 1-D1to4	ES-336760 ES-336760	1-SW11,12 1-SW13			į .	
ED-336943	1-D32	ES-336760	1-SW 1-5 1-SW 6,7				•
			•				
ED-336944	1-D34	ES-336760	1-SW10				
ED-336945	1-D41	ES-336909	2-SW1				
EE-330614	3-22	ES-336909	3-2 x				
EF-300599	3-14x	ET-200506	1-TR8				
EF-308848	3-12x	ET-200506	1-TR11,12	1			
EF-308933	3-11	ET-200558	1-TR7				
EF-309389 EF-315334	3-10 3-13x	ET-315410	1-TR4 1-TR23				
EF-336834	3-15x	ET-322775 ET-322775	1-TR23				
EF-336834	3-16x	ET-322775	1-TR39	1			
		1 21 322113	1 11(3)	L		<u> </u>	

# INDEX

## 2. MODEL AM-U210/J

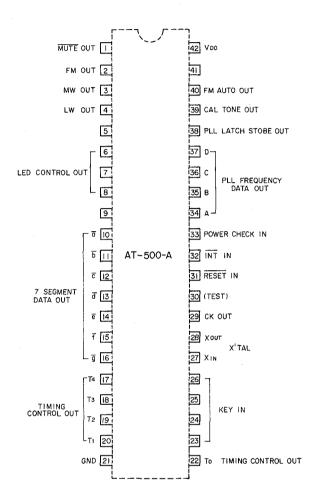
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BA-A2013A080A BA-A2013A080B BA-A2013A080D BA-A2013A080D BA-A2013A080E BA-A2013A080F BA-A2014A020A BC-332527A BD-A2013A020A BD-A2013A020B	1-2 1-3 1-4 1-5 1-6 1-7 5-14 5-1	ER-322787 ER-322787 ER-336919 ER-336920 ER-337108 ES-328787 ES-328788 ES-336897 ES-336906 ES-336907	1-R33 1-R5 1-R40 1-R8 4-25x 2-SW1 2-SW1 1-SW1 1-SW1				
BT-336887 BT-336888 BT-336889 BT-336890 BT-336891 BT-336893 BT-336910 EC-313532 EC-313533 EC-314688	4-29x 4-28x 4-30x 4-32x 4-31x 4-27 4-33x 1-C18 1-C15 2-C1	ES-336908 ES-336909 ET-307195 ET-310148 ET-322598 ET-322778 EV-315412 EV-336898 EV-336899 EV-3368911	1-SW1 2-SW1 1-TR4 1-TR3 1-TR2 1-TR1 1-VR3 1-VR1 1-VR2 1-VR1				
EC-320307 EC-320548 EC-320548 EC-326583 EC-330307 EC-333972 ED-200213 ED-200469 ED-200469 ED-300924	1-C28,29 1-C33 2-C1 1-C30 2-C1 1-C19 1-D5 1-D7 1-D1,2 1-D6	EV-336912 EV-336913 EW-305691 EW-306427 EW-306428 EW-336923 EW-336924 EW-336926 SA-332850 SE-332531A	1-VR1 1-VR1 4-17x 4-21x 4-16 4-18x 4-20x 4-19x 4-52 4-3x				
ED-309341 ED-322773 ED-323354 ED-330218 ED-330219 ED-336786 EF-249851 EF-306949 EF-306950 EF-306950	1-D8 4-2x 1-D9 1-D10 1-D3,4 4-1x 4-45x 4-45x 4-50x 4-51x	SE-332531B SK-332532A SK-332532B SK-332533A SK-332533B SK-3325354 SK-332535A SK-332535A SK-332535B SK-332536 SP-B604403	4-4x 5-6 5-7x 5-3 5-4x 5-5 5-9 5-10x 5-13 5-12x				
EF-306951 EF-306951 EF-306954 EF-323080 EF-325683 EF-325683 EF-325613 EF-601301	4-37 4-48 x 4-40 4-43 x 4-41 x 4-39 4-42 x 4-49 x 4-46 x 4-47 x	SP-B604404 SP-332521D SP-332521E SP-332524 SP-332527B SP-342316B SP-342316C SP-342316F SZ-631945 ZG-332538	5-11 4-8x 4-9x 4-55x 5-15x 4-6 4-7x 4-10x 4-22 5-8x				
EF-623103 EI-200938 EI-315799 EI-322599 EI-336917 EI-336930 EJ-240535 EJ-329610 EJ-332248 EJ-336896	4-44x 1-IC1 3-IC1 1-IC1 4-5 1-IC1 4-11 4-11 4-12x 4-13	ZS-319460 ZS-319460 ZS-322570 ZS-322580 ZS-332541 ZS-337191 ZS-447761 ZS-565942 ZW-305013 ZW-698308	4-54 4-36 5-16 5-17x 4-34x 4-24x 4-15 4-53x 4-56x 4-35x				
EJ-336900 EJ-336901 EJ-336904 EJ-336905 EJ-336915 EJ-336929 EJ-692908 EM-336916 EO-336902 EO-336934	1-J1 1-J5 1-J6 4-26x 1-J3 4-23x 3-IND1 1-L1 1-L2to5						
EO-336934 EO-338409 EO-338420 ER-308028 ER-316802 ER-316802 ER-316802 ER-321153 ER-322787	1-L2 2-FL1 1-L1 1-R36 1-R10 1-R23 1-R43,44 1-R9;10 1-R24 1-R30					: .	

#### **SECTION 4**

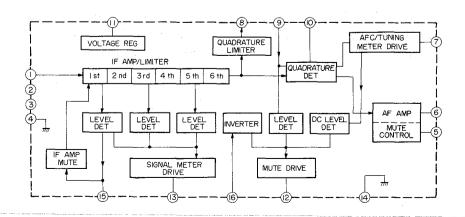
# SCHEMATIC DIAGRAM

- 1. SCHEMATIC DIAGRAM OF ICs
- 2. AT-S210 NO. 1640444A SCHEMATIC DIAGRAM
- 3. AT-S210L NO. 1640445A SCHEMATIC DIAGRAM
- 4. AT-S210J NO. 1640446A SCHEMATIC DIAGRAM
- 5. AM-U210 NO. 1640448A SCHEMATIC DIAGRAM
- 6. AM-U210J NO. 1640449A SCHEMATIC DIAGRAM

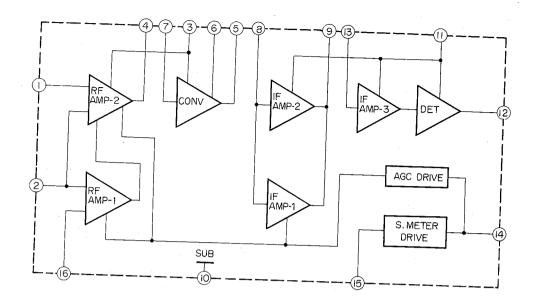
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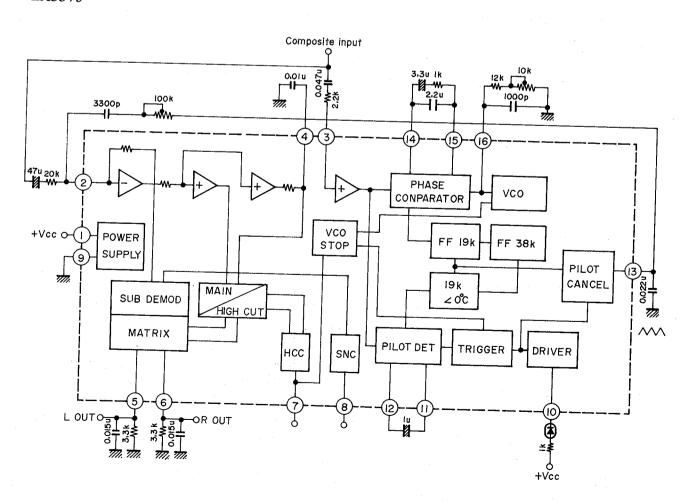
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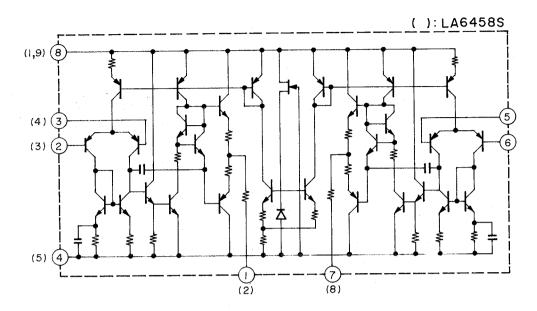
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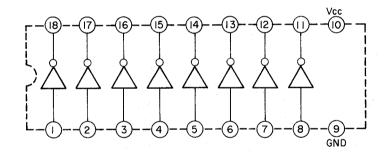
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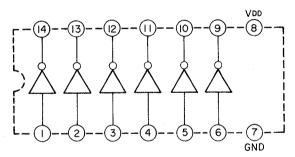
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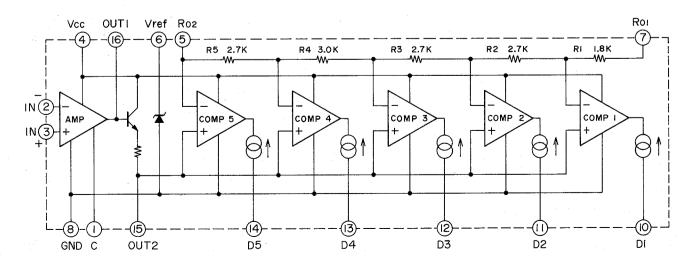
LB1240.



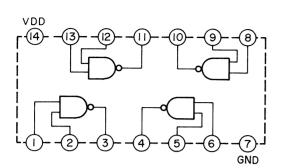
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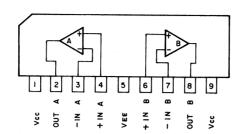
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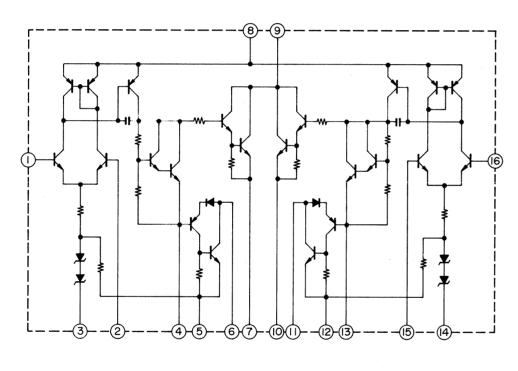
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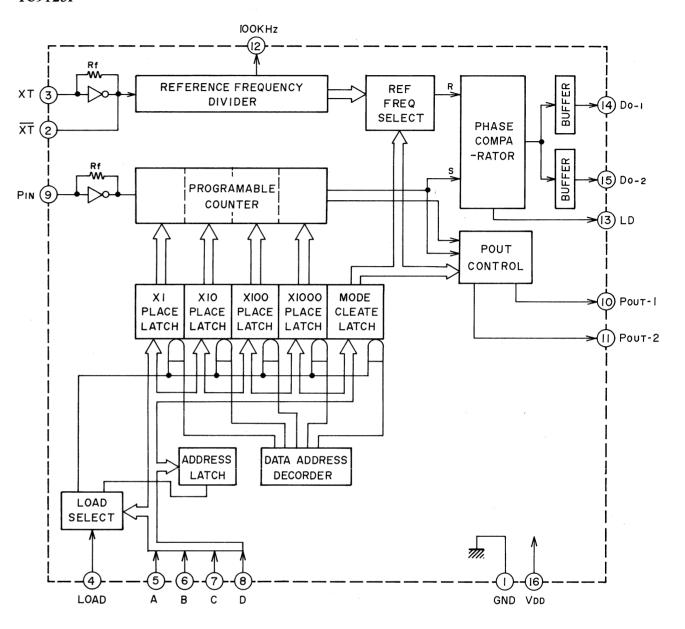
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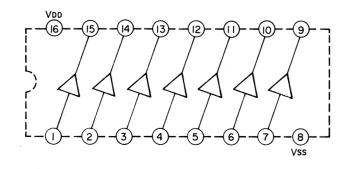
#### STK463-ST



### TC9125P



#### TC5066BP



#### TD6102P

